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CABINET GOVERNMENT IN THE UNITED
STATES.

In the number of this Review for November, 1891, an article appeared by Mr. Gamaliel Bradford, entitled, "Congress and the Cabinet," in which Mr. Bradford discusses the bill reported in 1881 by Senator Pendleton, to give the members of the Cabinet seats upon the floor of the Senate and House of Representatives, with the right to participate in debate, and to give information asked by resolution or in reply to questions propounded to them under the rules of the Senate and House. In the report of the special committee having this subject in charge there is nothing to indicate that the members of the Cabinet were expected to do anything more than appear upon the face of the bill. Yet Mr. Bradford, in discussing it, has assumed nothing less than a revolution in our methods of legislation. Instead of the mere "privilege to give their suggestions and advice in debate, by word of mouth," as proposed by the Pendleton Committee, the members of the Cabinet are, in Mr. Bradford's interpretation of the bill, to take the initiative in preparing and in introducing bills for the action of

Congress. In other words, the initiative and conduct of the business of legislation is to be transferred from the members of Congress to the officers of the Executive department. This would be a new method of legislation, which might properly be entitled, "irresponsible Cabinet government." "The Cabinet," says Mr. Bradford, "would be ready to present, at the opening of the session, a series of measures perfectly prepared from the point of view of the general interest, and would at once demand and receive for these the attention of the Houses in separate succession." Of course it follows that the system of referring bills to legislative committees would be abolished, and the whole business of Congress would be done in open sessions, under the guidance of the Cabinet ministers. Now, whether this change be desirable in itself or not, it certainly is not the question raised by the proposed bill; and it is difficult to see how this bill could, by any possibility, have that effect. That the committee, of which Mr. Pendleton was chairman, had no such object as this in view is made clear by the report which accompanied the bill. "The head of a department," the committee declared, "reporting in person and orally, or participating in debate, becomes no more a member of either House than does the chaplain, or the contestant or his counsel." Again, "Your committee is not unmindful of the maxim, that in a Constitutional government the great powers are divided into legislative, executive, and judicial, and that they should be conferred upon distinct departments. These departments should be defined and maintained; and it is a sufficiently accurate expression to say that they should be independent of each other," but not necessarily entirely separate. The committee states further, that in its opinion the bill would not aggrandize or impair the executive power, as defined in the Constitution. "It will not change the relations of the Cabinet to the President and Congress." "The heads of departments "cannot assume undue leadership in Congress, because success will not prolong, as defeat will not terminate, their tenure of office." "The concur-

rence of opinion between the President and Congress is not essential, perhaps is not possible."

There would seem to be nothing, therefore, in the proposed bill, or in the accompanying report, that would indicate any intended change in the system of legislation by committees, or any transfer of the initiative therein to the executive. Indeed, would not such active participation in legislation by the heads of departments be directly contrary to the spirit of that clause of the Constitution which declares that "no person holding any office under the United States shall be a member of either House during his continuance in office"? The position of the founders of our institutions, on this point, is still more definitely expressed in the Massachusetts Bill of Rights: "In the government of this Commonwealth, the legislative department shall never exercise the executive and judicial powers, or either of them; the executive shall never exercise the legislative and judicial powers, or either of them; the judicial shall never exercise the legislative and executive powers, or either of them; to the end it may be a government of laws, and not of men." In view of the notorious attempt of George III., toward the end of the last century, to tyrannize over the English Parliament and nation, the thing that the framers of our Constitution most feared in government was the excessive power of the executive; and to prevent this, they emphasized strongly the separation of the executive and legislative departments. There was nothing in the Constitution, however, to prevent the President and the Cabinet officers from making oral communications to the Houses of Congress; and that, in fact, was a common practice during the first administration of Washington. Moreover, in the Act of Congress of September 2d, 1789, establishing the Treasury Department, the Secretary of the Treasury was "to make report, and give information to either branch of the legislature, *in person or in writing* (as may be required), respecting all matters referred to him by the Senate or House of Representatives, or which shall per-

tain to his office." In the debate on this measure, in the House, it was objected that it would "establish a precedent which might be extended until we admitted all the ministers of the government on the floor . . . thus laying the foundation for an aristocracy or a detestable monarchy." Although the above-mentioned provision was retained in the bill, it was soon afterwards determined by Congress that the Secretary of the Treasury should communicate to Congress in writing, and not in person, and that has since been the practice. The strict right to take part in debate might, perhaps, be brought into the category of communications to Congress, and not violate the letter of the Constitution, though it would evidently not be in accordance with the intention of the framers of that instrument. Be that as it may, the intention of the Pendleton Bill did not go beyond this strict right of communication and debate. "We are dealing with no new question," says the report; and it then refers to the above-mentioned practice in Washington's administration. Now the Pendleton Bill, in this limited sense, if enacted into a law, would, perhaps, do no serious harm, unless, indeed, it should tend to create friction between the two departments, or be followed up on the part of the executive by intrigue and the use of patronage in support of its views. But, on the other hand, would it be of great advantage in legislation? How could it, for instance, eradicate the evils of legislation, which Mr. Bradford so much deplors? It is difficult to see how it could change in the least the method of legislation by committees, which is, perhaps, the feature most open to criticism. With no right in debate except to favor or oppose bills already introduced, and already acted upon by committees, it is hardly probable that the heads of departments could ever become leaders of parties in Congress. They could undoubtedly make known the opinions and desires of the executive department in regard to proposed bills; and, in the case of a certain class of bills touching the business of this department, it might be highly useful. But in regard to the great

majority of bills, not of this nature, it is a mistake to assume that the opinion of the Cabinet ministers would have greater weight, or, indeed, be more valuable than that of Congressmen. As to that part of the proposed measure which requires the members of the Cabinet to answer questions in the Houses of Congress, there is perhaps no serious objection. If it should cause the executive business, especially in the field of foreign relations, to be done more in the light of day, it might be a distinct advantage. But the scheme, as a whole, hardly appears so unquestionably advantageous, that one can reasonably impute unworthy motives to Congressmen for neglect to make it a law. And may it not be doubted whether Mr. Bradford, even, would be satisfied with the Pendleton Bill as thus strictly defined?

What Mr. Bradford would seem to desire for the United States is responsible Cabinet government; but as that cannot be had without a radical change of the Constitution, he proposes that Congress shall voluntarily transfer the conduct of legislation to the wholly irresponsible officers of the executive department. Now, granting that Congress would consent thus to efface itself—a possibility so remote as to be hardly worth considering—is it certain that we should have better laws, or a better system of legislation? "The President," says Mr. Bradford, "represents the country as a whole, and is therefore in a position to consider the 'general interests of the people.'" But how can the President represent the country as a whole on any question which interests every part? Take, for instance, the question of the free coinage of silver; the South is for it, the East against it, and the West divided. No one man can represent all these views. The only way to settle the question is by the vote of a majority of the representatives of all sections of the country. Is there not fallacy in the statement that "the people of the United States, as a whole, are not represented at all in either House of Congress?" It is true that each member represents a locality; but as a body, Congress represents every State and district in the land. And not only

the majority of the people are represented, but, taking the country as a whole, the minority as well. Whereas, the President represents merely the majority, and often, indeed, not that. On what theory can President Harrison, for instance, be said to represent the States or people of the South, or any other part of the nation which cast their votes against him and against the principles which he advocates? It may be said that, in the case of bills of a purely local or sectional interest, the Cabinet officers might counteract the "log-rolling" propensities of individual Congressmen. But if the President chooses to use it, he has now in the veto power a pretty effectual check on that species of legislation. There was an excellent opportunity of this kind in the recent Chinese-exclusion Act. The difficulty here is that the President is dominated by the same party exigencies that prevail over Congressmen.

Again, Mr. Bradford would seem to believe that by giving the initiative in legislation to the executive officers, such laws as the McKinley Act, of which he disapproves, would not be enacted. On the contrary, would it not facilitate the passage of such bills if they were supported by the executive and its influence? We can hardly assume that the President will be opposed to the principles of his party. The McKinley Act was passed because a majority of the representatives of the people, in Congress, were in favor of it; and no one will say that it was not openly and fairly discussed. It is true that unwise laws are passed; but much of the fault lies with the people rather than with their representatives. And as Mommsen says of the Roman Republic, "while they did not stop the evil at its source, it was to little purpose that the better disposed listened with anxiety to the dull murmur of the swelling flood, and worked at dykes and dams." Legislation will not be greatly improved by putting it into the hands of leaders, while the vicious practices of the caucus and the "spoils system" go on unchecked; eradicate these evils and reform in methods of legislation will follow. The overgrown power of the Speaker and the exag-

gerated committee system in our legislation are not integral parts of the Constitution ; they are subject to the temporary rules of the House, and may be modified or abolished at pleasure. This would seem to be a more fitting point of attack for our critics and for "popular agitation" than to attempt to remedy the evil by the doubtful expedient of transferring the conduct of legislation to the executive branch of the government, even were it possible to do so.

Probably no one will deny that our system of legislation has its faults, but is there any system that is perfect? The question should be, which system is the safest in the long run? The important thing in legislation is not to have a machine which will turn out laws with the least friction—where there is no friction, there is very likely to be despotism—but which shall be government by the people, and still protect their fundamental rights against anarchy on the one hand and tyranny on the other. It may be doubted whether the rule of the people will for a long time to come be a very orderly kind of government. Mistakes may be costly, but they will be corrected ; the serious danger to guard against is dishonesty and corruption, and for this mere dykes and dams will not be adequate.

As to the larger question of Responsible Cabinet Government, as compared with ours, I have discussed it elsewhere,* and will therefore limit myself in this paper to a brief statement of some points of difference, and to the opinions of some recent writers upon the subject.

The critics of our system of government have as a rule dwelt upon its defects only, leaving its advantages entirely out of view ; and on the other hand, in comparing it with the English system, they have as carefully extolled the excellencies of that system, ignoring its weaknesses. Now, let us for once reverse this process, and point out, first, some of the defects of Cabinet government. The feature of their government, which is causing most anxiety in the minds of many educated Englishmen, is perhaps the unchecked power

* Papers of the American Historical Association, vol. iv., part 3, p. 109.

of the House of Commons ; which has gradually "arrogated to itself the character of a constituent national convention to impose any changes in the national institutions it sees fit." There was no danger so long as the House of Commons represented only the educated and wealthy classes, who, whether Whig or Tory, were always conservative, differing in that respect only in degree. But will it be the same now that the masses, comprising the ignorant, the radical, and the discontented elements of society, are represented in the House of Commons, and have a voice in appointing the cabinet and in shaping the legislation of the kingdom ? Mr. Bagehot was frank enough to say that he was "exceedingly afraid of the ignorant multitude of the new constituency ;" he felt that if they once discovered their power and determined to use it, there was no check which could stay their hand. Mr. Caleb Cushing once put in terse language this inherent weakness of the English form of government. He said : "Now, the submergence of the power of the Crown in Parliament, and that of Parliament in the House of Commons, and the commitment of all these powers to transitory nominees of the House of Commons, are facts which, combined, have produced the result that government in England is at the mercy of every gust of popular passion, every storm of misdirected public opinion, every devious impulse of demagogic agitation—nothing corresponding to which exists in the United States."

Another and the most prominent defect of cabinet government is the instability of the ministers. Cabinet government is the government of a party ; and for its successful operation it must have at all times a majority at its back in Parliament. If it were possible to direct the current of public opinion into exactly two channels there would be but two parties, one of which would generally be in the ascendancy ; but in practice this is found to be a very difficult thing to accomplish, and it becomes the more difficult as the right of suffrage is extended to the mass of the people, with their ever varying interests. In the countries of Continental

Europe, parties, if indeed they may be said to exist, are broken up into groups, no two or more of which ever act together for any considerable length of time; and ministries are, without a moment's notice, confronted at brief intervals with opposing majorities, and must give place to others, whose tenure of office is, however, equally unstable and ephemeral. "A cabinet," said the late Professor de Laveleye, "is never sure of its majority. . . . To-day it obtains a vote of confidence comprising two-thirds of the voters; a few days later, it falls, on account of some incident of insignificant importance. In order to keep its partisans united it must engage without ceasing in compromises, concessions and combinations. . . . A chief of a group, local or provincial, desires a road, a bridge or a railway; he must be accorded everything he demands, or he will carry his forces over to the opposition and defeat the government. The amount of thought, of adroitness, of eloquence, and of suppleness which a minister is obliged to make use of in order to keep his place, even for a year, is prodigious. The most difficult work of a diplomat is child's play by the side of it." Is it a cause for wonder, then, that ministries are unstable and that legislation and administration are paralyzed? It may be said that they do these things better in England; but even in England there are not lacking evidences of the same evil. Speaking of parliamentary government in England, Professor Gneist says: "After all correctives for the moderation of the social conflicts of interest have ceased, *this* kind of party rule falls into a helpless dependence on unforeseen combinations of social interest, on prejudices relatively stronger, on political agitation and the tactical skill of party-movement, to which already, under the second Reform Bill, Disraeli, as well as Gladstone, owe their respective positions. The twofold division into a Conservative and Liberal parliamentary party, which previous to the present parliamentary government was necessary, in reality no longer exists. For a length of time, side by side with the two parties, there have existed (as in Germany) radical, denomi-

national, national sections, having their special interests, with 'independent' members and others, whose number is slowly, but steadily, on the increase. The bearing of the English Parliament had already become so changed under influence of these factors that it was found expedient to impose stern restrictions on the liberty of speech, once even (in 1881) by the exclusion of thirty-two fractious members. Already, since the Reform Bill of 1867, the dismemberment of parliamentary parties has, in substitution of a party-government on traditional lines, led to the quasi-dictatorial position of a single statesman, a personal interpreter of the actual average of public opinion! Till the advent of Radical Governments, therefore, there is nothing for it but Coalition Ministers."

For how long a time did the Home-rule party block the business of Parliament, and render the tenure of ministerial office almost as precarious as in France or Italy? It is true, the dead-lock was broken, but it was broken only by resorting to the device of Mahomet, that of going to the mountain if the mountain would not come to him. Parnell would not go to Gladstone, so Gladstone went to Parnell. He had already gone to the Radicals, and, if his speeches are an index, he is now far on the road to the Socialist camp. There is no other alternative; one of the two great parties must yield to any faction which becomes strong enough to hold the balance of power between them, or suffer the inevitable consequences—instability and impotence of government. "No such instability," says Judge Hare, "can well occur in the United States, where if a third party rendered ordinary legislation impracticable, with the view of obtaining some real or fancied benefit for a peculiar State or section, it would still be possible to vote the supplies; and the government would proceed in its accustomed course under the guidance of the President, notwithstanding the discord which prevailed in Congress."*

The absolute necessity, moreover, of maintaining a party majority in support of the ministry, if Cabinet government

* Constitutional Law, I. 179.

is to be successful, as in England and Belgium, has engendered in those countries a most excessive and vicious influence of party. The rank and file of a party are drilled down to a dead level of opinion; no "difference of creed" is permitted, and any independence of thought or action in political matters is sternly rebuked. The leader is to formulate a policy, and the mass of the party must accept it without question. "Government can go on," said Professor de Laveleye, "only by rigid discipline in the party, otherwise it ends in confusion, impotence and discredit."

There is a certain attractiveness in the principle of perfect organization under the guidance of a single mind; we cannot but admire the orderly precision of a well disciplined army, or the effective methods of a thoroughly drilled fire-brigade. They represent simplicity and strength, and are in these respects wholly commendable. Organization for a single purpose is an excellent thing, if the purpose be worthy; but organization without a special object—for merely general purposes—is pretty sure to degenerate into organization for the sake of the organization; it will then be supported from selfish motives, and will fall under the power of self-seeking leaders. Burke defined party as "a body of men united for promoting by their joint endeavors the national interests upon some particular principle upon which they are agreed." Except in this sense, parties are an evil; and the more strictly they are disciplined and the more obedient they are to leaders, the greater is the evil. Unscrupulous and dishonest men will always have the advantage over honest men as political drill-masters; what else indeed does the "machine" in our politics mean? Under these conditions, too, patriotism comes to mean loyalty to party or the party leaders, and desertion from the party is branded with the stigma of treason.

It will doubtless be said that we have this same defect in our party divisions. The evil is certainly a very serious one with us, and is, among other results, the chief cause of inefficient and even vicious legislation in the United States.

But the difference is that the government in our system does not depend for its existence upon a party majority in the legislature; it may, and frequently does, exist in the face of a hostile majority. Hence there is not so much at stake in breaking the party lines, and independence of political action is therefore much more common both among individuals and in the press; and, notwithstanding the assertion of partisan leaders to the contrary, it is a most healthy and corrective element in our politics. The rank and file of the party retain their individuality, and responsibility for their actions, instead of transferring both to leaders. There is something so un-democratic, too, in this deference and obedience to leaders, something so foreign to the character of the American people, that it is hardly conceivable that they should ever resort to it. As M. de Laveleye said of Cabinet government in Belgium, "it stifles individual initiative and kills originality in political matters."

Nor is it to be assumed, because England has suppressed the "spoils system," that only responsible government is capable of accomplishing this task; it is the argument "*post hoc propter hoc*," and really proves nothing. The use of patronage in France, Italy and Greece continues to flourish with little attempt at restraint, and is more vicious than it ever was in the United States; the incentive to resort to it is stronger indeed where the continued existence of the ministry depends upon retaining a majority. As to other forms of corruption, the history of administration in the United States will bear comparison with that of any other State. That we need a radical reform in the system of legislation by committees, which permits of bare-faced corruption by the lobby, will hardly be disputed; but we should guard against applying a remedy which may prove to be worse than the disease.

Some of the advantages of our system of legislation have been indicated in the preceding pages, by comparison with the defects of Cabinet government. It may be said further, that we have in the Senate, one of the most efficient legislative bodies that have ever existed in any country. It is the

object at once of the admiration and the envy of the statesmen of Europe of all parties ; and even our most severe critics are constrained to admit the excellence of its legislative methods. We have, then, a powerful corrective, in the Senate, of the inefficient legislation of the House.

Without going further into the details of our legislative system, it may be said finally, that we possess checks upon hasty and dangerous legislation touching all the important fundamental rights of the people, which do not exist in countries governed by responsible cabinets. And if we compare the actual working of our government with that of Cabinet government in any country except England, we shall find the advantage strongly in our favor, rather than against us. If one is inclined to doubt this statement, let him read Professor de Laveleye's account of parliamentary government on the continent of Europe, in his last book (*Le gouvernement dans la démocratie*). In the opinion, too, of Professor Gneist, than whom no one has made a more thorough study of English institutions, the English Parliament, by the recent extension of the suffrage, is now exposed to the same influences, and is exhibiting the same defects which prevail on the continent.

It seems somewhat singular that Americans should continue to write essays and books in praise of responsible Cabinet government, when that system is not only being discredited at home, but when, as these same writers admit, there is not the remotest possibility of its introduction into this country. Is not this a waste of energy that would be better employed in a direct attack upon the evils complained of? Mr. Bradford considers the ballot and civil service reforms as mere details and of minor importance ; but they are details, which if carried out, will undermine the worst of our political evils. What Mr. Bradford says of the necessity of greater publicity in our legislative methods is undoubtedly true, but it is not so certain that this can be brought about by the changes which he proposes.

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SCHOOL SAVINGS BANKS.

The School Savings Banks system, so favorably known and acceptably used in some European countries, has attracted considerable attention in the United States during the past year. Its experimental introduction in a few schools here has proven it a successful and valuable educational factor. It would appear that only a wider knowledge of the simplicity of inculcating thrift, in connection with book learning, was required to insure its general adoption.

School Savings Banks are in use in three hundred schools in this country, and the 28,000 scholars who are depositors have about \$140,000 to their credit. These School Banks are in eleven different States, Pennsylvania having one hundred and forty of them and New York sixty-five; the others being in Nebraska, Vermont, Maine, Indiana, California, Ohio, North Dakota, Massachusetts and New Jersey. These have, with few exceptions, have been established since 1888; most of them during 1890, 1891 and 1892. Frequent inquiries as to the practical working and advantages of the system betoken popular interest in this method of teaching economy. Anything that promises such national reform in the production of self-depending and self-supporting citizens, such a perceptible decrease of crime and pauperism necessarily arrests the attention of thinking people.

Dr. W. T. Harris, Commissioner of Education for the United States, devotes several pages of his last Annual Report to School Savings Banks.* The teaching of economy in the public school will be more fully recognized in the future, for it has been undeniably proven one of the most acceptable acquisitions to school life. It gives a child individuality and makes him part and parcel of the productive and independent force of the nation before he

* Since reprinted in pamphlet form.

has been allowed to feel he is a nonentity or a dull drain on the resources of his parents. It fosters equality, arouses thought and inculcates habits of thrift, which are preventive of the small practices which lead to vice.

The idea of School Savings Banks dates back to 1834, when Dulac first introduced it in a communal school in Le Mans, France. No general thought was given to the subject until some years later, though the system was established in Würtemberg in 1846 and in Buda-Pesth in 1866. In 1866, Professor Laurent, of the University of Ghent, appreciating the practical value of School Savings Banks, devoted some time to advancing and explaining their advantages to educators and people, going from one school to another in his philanthropic mission. As the result of this effort a number of School Banks were opened in Belgium, and during the year closing July, 1891, some \$800,000 were deposited by the children. Banks were also established in Germany and France and were later introduced in Italy and Holland.

France, which now leads the world in this movement, owes her progress in this department of education to Monsieur A. C. Marlace, who doubtless sits to-day, as usual, in his Paris study pondering on the condition of the system in the twenty-three thousand schools in the French Republic or compiling statistics of their relative economies. He has for twenty years devoted his life to this work. Deputed by the government he made a study of educational methods, with special reference to economic instruction, at the International Exposition in Vienna in 1873. He consulted with Professor Laurent and other philanthropic leaders. He visited schools in Germany, Belgium and England where Savings Banks were in use and made a close study of their methods of administration. Returning to Paris he reported that nothing could afford greater amelioration to the poor than the careful institution of School Savings Banks. Monsieur Marlace formulated a system, born of his thoughtful study and accumulated knowledge, and under the protection of the government it is now in use throughout France. 23,375 schools

receive and care for the savings of the children and 478,173 pupils have opened accounts in their own names in Savings Banks where their deposits aggregate 12,683,312 francs. The French acknowledge this practical inculcation of economy, this equalization of wealth, as a most reliable reform factor.

Madame Carnot, wife of the French President, gave a Christmas entertainment in 1888 to four hundred of the poorest school children in Paris at Élysée Palace and gave each child a School Savings Bank book with credit of ten francs. Many lesser instances of practical encouragement to the poor are cited by the French press. The greatest assistance that can be extended to an individual is to teach him to help himself; to see and understand his own resources and responsibilities. Pope Leo XIII. at a Papal jubilee gave a Bank book and one hundred francs to each boy and girl in a certain district, born on New Year's day. A contribution of one franc or a half franc to start a school account, given to a child, or better, an opportunity shown him to earn the same amount instills the initial lesson of economy quite as effectually.

The system is in use in Germany, Hungary, Russia, Switzerland, Denmark, Holland and England, but administered often by private associations. Manchester and Liverpool, in England, have the system in rather general use since the free educational act went into effect. An English journal of September, 1891, says "The three-pence weekly school fee, under the old system, has been made the lever of an economy of no little consequence. Parents are asked to deposit in Savings Banks the three pence which formerly went to the State. Many school managers have opened School Savings Banks in connection with the schools. In Manchester, where the increased attendance is upward of two thousand, no less than five thousand new accounts have been opened in School Savings Banks."

The first public mention we have record of relating to the work in this country is a paper read by Mr. John P. Town-

send, of New York, before the American Social Science Association in 1876, and articles for the press by Mr. T. S. Merrill, of Beloit, Wisconsin, written about the same date. Mr. Merrill consulted authorities abroad and had School Savings Banks introduced into the public schools of Beloit on a simple plan which yielded, for five years, excellent results. Mr. W. H. Beach was principal of the school during these years and on his removal to Madison the banking system was discontinued through lack of interest by the new principal. Mr. Beach wrote to me recently as follows in regard to its effects in Beloit school: "The boys and the girls acquired industrious habits, were looking for and doing work during vacation. The system led to economy of time and energy as well as money. It made better and more thoughtful students. It promoted liberality, inasmuch as it insured means with which to be generous when occasion presented." I quote Mr. Beach because he had the first experience with School Savings Banks in the United States.

In the winter of 1879-80 Captain R. H. Pratt, of the Carlisle Indian Industrial School, established a savings system for the Indians under his supervision. "It was founded on no criterion," he writes, "but was simply the result of my judgment that in teaching the Indians the use of money we must necessarily have the money; to teach them to save it, and to be economical it was of the utmost importance to our success that we do so practically and not theoretically. I therefore established a system of paying each student a very small sum for his work. They were encouraged to make deposits and each one was provided with a bank book." Captain Pratt's method was far-seeing. His Indian pupils have now \$10,000 to their credit as savings, and those who have left after completing their training have taken as much more in cash, trunks, clothing and equipments to their Western homes. This knowledge of every-day economy cannot but be of intense value to the remnant of the race who owned the country before money was the one great factor of exchange.

Mr. J. H. Thiry, who came to this country a few years ago for his health, was acquainted with the School Savings Banks in his native France. Elected School Commissioner in Long Island City in 1885 he introduced the system into the city schools. The system of their administration was formulated with care and is so simple and effective as to elicit general commendation. Mr. Thiry has given personal care and time to the work and has written pamphlets setting forth its advantages and explaining its ease of application.* He collects and prints a yearly statistical account of the founding and condition of the School Banks of the United States. By the table of January, 1890, we had 88 School Savings Banks, 15,124 depositors with \$50,878.12 to their credit; by the table of January, 1891, (see table, pp. 20-21) the banks were in use in 209 schools having 24,067 depositors, with \$83,594.84 as their earnings and savings in banks. The increase of the past year has been greater. The exact figures as reported February, 1892 are 285 schools having the system in use. Of the 72,562 scholars in the 285 schools 27,430 are depositors. The amount of their deposits to date being \$270,428.76, of which \$133,913.75 has been withdrawn, leaving a balance of \$136,515.01 due the pupil depositors.†

Our Boards of Directors in some localities have taken up the work of introducing School Savings Banks systematically. The writer has been closely identified with this system since 1888, when it came to her knowledge through mention at the annual meeting of the American Economic Association at Philadelphia and through experience in its introduction and observation of its operation she recog-

* "School Savings Banks in the United States," pp. 48, 1890.

† "Supplement" to the same, pp. 26, 1892.

‡ Some schools have escaped Mr. Thiry, the compiler of the table. A few have failed to report, and others have taken up the work during the past two months. Among those of which he has no mention are the Easttown, Kennett Square, Shady Grove and Independent, Pennsylvania and Lawrence, Kansas, and those which have opened since are Portland, North Dakota; Phoenixville, Jenkintown, Coatesville and several other township districts in Chester and Montgomery Counties, Pennsylvania. The figures, while interesting, are therefore inadequate.

nizes its uplifting force. The popular interest manifested in the subject is, perhaps, best exemplified by the number of inquiries received in regard to its methods and manner of establishment. Passing over the time anterior, since November, 1891, the writer has answered two hundred letters, which came from almost every State in the Union, asking for facts relating to the School Savings Banks and how to institute them. These letters were from bankers, teachers and parents, generally expressing approval, in advance, of such practical instruction. Last summer the system was explained to the school principals and School Commissioners of St. John, and encouraging interest is manifested in letters received from New Brunswick, Nova Scotia, Manitoba and British Columbia, where School Savings Banks are likely to have early trial.

In order to establish the system successfully it is necessary to have the co-operation of a bank and the approbation of the school authorities. The distribution of a few facts in regard to the practical economy through printed literature, the newspapers or a little meeting called to present the work seldom fails to win the desired support. The banks in most towns are so anxious to secure the children's deposits that they have gladly assumed the expense of printing the required forms; indeed, in some instances it has been a delicate matter to decide which bank should have the privilege. The managers realize that if the children deposit with them they are likely to be customers in later life, and from a business standpoint they are always ready to encourage habits of thrift.

Bankers and educators are taking up this subject at their State meetings and passing resolutions of approval and recommendation. The Michigan State Bankers' Association in convention at Marquette, July, 1891, after a forcible presentation of the advantages of School Savings Banks, passed resolutions asking that, inasmuch as three-fourths of the school teachers were women and that as the women had in the Woman's Christian Temperance Union, the largest and

TABLE SHOWING THE OPERATIONS OF SCHOOL SAVINGS BANKS IN THE UNITED STATES
IN 1891.

Order No.	Cities and Schools which have adopted the system.	States.	No. of Sch's		Date of Introduction.	No. of Scholars		Amount		
			Hou- ses.	Banks.		On Registr.	On De- posit's.	†Collected.	†Withdrawn.	Due Depositors
1	Long Island City	N. Y.	14	102	March 16 . . . 1885	5,179	2,385	\$37,235.94	\$22,888.27	\$14,347.67
2	Rutland	Vt.	6	28	February 1 . . . 1886	1,300	834	4,306.01	1,090.87	3,215.14
3	Islip, Long Island	N. Y.	1	6	September 30 . . . 1886	265	70	2,032.17	1,019.33	1,012.84
4	Elmira	N. Y.	4	16	October 7 . . . 1886	2,229	1,226	*11,000.00	*5,819.71	5,180.29
5	Lincoln	Neb.	12	80	February 1 . . . 1887	5,215	1,500	20,867.37	15,652.86	5,214.51
6	Amsterdam	N. Y.	6	24	April 4 . . . 1887	2,583	815	16,099.23	5,366.41	10,732.82
7	Hornellsville	N. Y.	4	35	January 30 . . . 1888	2,500	822	10,000.00	5,735.52	4,264.48
8	Y. M. C. Institute New York City	N. Y.	1	1	March 19 . . . 1888	610	175	42,051.64	25,948.16	16,103.48
9	Jamestown	N. Y.	10	46	September 3 . . . 1888	2,847	673	5,471.41	2,871.31	2,600.10
10	Buffalo { School 24 } { School 17 }	N. Y.	4	25	October 20 . . . 1888	1,537	668	4,174.91	2,462.32	1,712.59
11	Kings't'n { School 3 } { Bch of 3 }	N. Y.	1	11	November 9 . . . 1888	562	346	389.86	50.00	339.86
12	Olean	N. Y.	1	7	December 5 . . . 1888	253	187	866.70	96.22	770.48
13	Cazenovia	N. Y.	1	35	January 3 . . . 1889	303	23	250.50	60.50	190.00
14	Winfield, Long Isl'd	N. Y.	7	35	January 3 . . . 1889	1,600	835	8,955.88	5,217.62	3,738.26
15	San Diego	N. Y.	1	5	January 3 . . . 1889	320	175	1,432.71	115.79	1,316.92
16	National City	N. Y.	1	49	March 4 . . . 1889	165	60	503.65	248.55	255.10
17	Brooklyn, School 31	Cal.	12	4	September 1 . . . 1889	2,800	750	3,226.00	1,075.34	431.00
18	Pottstown	N. Y.	5	26	September 16 . . . 1889	1,474	170	2,279.88	1,792.01	487.87
19	Norristown	Pa.	20	48	December 30 . . . 1889	2,158	967	18,041.29	8,041.00	10,000.29
20	Shannonville	Pa.	6	54	January 2 . . . 1890	2,540	1,204	12,317.97	5,912.95	6,405.02
21	Cheltenham	Pa.	1	3	January 9 . . . 1890	70	23	109.92	11.46	98.46
22	Brookline	Mass.	1	130	January 9 . . . 1890	130	70	590.93	105.99	484.94
23	Chester	Pa.	12	40	January 20 . . . 1890	2,000	818	5,030.34	328.43	4,701.91
			61	61	February 24 . . . 1890	3,329	1,025	15,418.03	7,132.85	8,285.18

SCHOOL SAVINGS BANKS.

24	West Chester	Pa.	3	23	February 24 . . . 1890	892	449	3,830.92	746.57	3,084.35
25	Williamsport	Pa.	14	65	April 1 . . . 1890	4,578	*2,500	*12,500.00	9,000.00	9,000.00
26	Conshohocken	Pa.	2	15	April 7 . . . 1890	740	384	2,283.41	954.36	1,329.05
27	West Grove	Pa.	2	4	April 7 . . . 1890	160	50	299.80	40.00	259.80
28	Wilkesbarre	Pa.	35	35	May 15 . . . 1890	—	—	—	—	—
29	Omaha	Neb.	37	390	May 20 . . . 1890	114,000	14,547	112,620.94	16,172.39	16,448.60
30	Junietta	Neb.	2	3	September 22 . . . 1890	185	85	195.00	85.00	110.00
31	Philmont	N. Y.	1	4	October 7 . . . 1890	280	137	677.86	25.00	652.86
32	Schuyler	Neb.	4	14	October 12 . . . 1890	600	175	3,097.33	1,632.79	1,464.54
33	Greenville	Ohio	2	20	October 27 . . . 1890	900	286	1,679.47	849.57	829.90
34	West Whiteland	Pa.	4	4	November 10 . . . 1890	156	44	134.97	12.25	122.72
35	South Omaha	Neb.	—	—	November 14 . . . 1890	3	—	—	—	—
36	Phillipsburg	Pa.	1	13	January 4 . . . 1891	660	385	1,625.00	225.00	1,400.00
37	Doylestown	Pa.	1	7	January 12 . . . 1891	300	180	1,217.53	111.03	1,106.50
38	Campello	Mass.	1	6	January 26 . . . 1891	530	200	935.24	218.57	716.67
39	Rockland	Me.	1	3	February 11 . . . 1891	170	92	385.85	.75	365.10
40	North Wales	Pa.	1	5	March 12 . . . 1891	200	120	564.65	60.00	504.65
41	Warren	Pa.	15	15	March 12 . . . 1891	770	300	3,000.00	40.00	2,960.00
42	Waveland	Ind.	1	6	September 14 . . . 1891	230	155	149.48	16.60	132.88
43	Lock Haven	Pa.	4	24	September 25 . . . 1891	1,250	684	1,130.12	19.26	1,110.86
44	Y. M. C. A., West Troy	N. Y.	1	1	September 25 . . . 1891	38	20	7.03	.99	6.04
45	Corry	Pa.	4	20	October 1 . . . 1891	917	401	379.76	—	379.76
46	Guide Rock	Neb.	1	3	October 19 . . . 1891	117	34	31.70	.15	31.55
47	Mendocino	Cal.	1	4	November 2 . . . 1891	179	66	166.85	—	166.85
48	Brookville	Pa.	2	11	December 4 . . . 1891	539	183	221.61	—	221.61
49	Mayville	N. D.	1	2	January 4 . . . 1892	120	37	68.80	—	68.80
50	Boys' Parlor	N. J.	1	1	February 4 . . . 1892	90	48	2.05	—	2.05
51	Camden W. C. T. U.	Pa.	23	26	February 29 . . . 1892	1,502	—	—	—	—
52	Phoenixville	Pa.	5	5	February 29 . . . 1892	180	—	—	—	—
53	Parkesburg	Pa.	285	1,440	—	72,562	27,430	\$270,428.76	\$133,913.75	\$136,515.01

* Estimated. † From date of introduction. ‡ Includes South Omaha collections. § Figures included with No. 29.

most systematic organization in the world for carrying on reform work, they be requested to forward this great movement. Several other bodies of men and women in convention assembled have recently passed resolutions and motions of the same tenor.

The subject was presented at the National Convention of the Woman's Christian Temperance Union, Atlanta, Ga., Nov., 1890. At the Woman's Council in Washington, February, 1891, it was taken up as a department of work by the World's National Woman's Christian Temperance Union.* These are organizations whose membership aggregates 500,000, and we are looking forward to the appointment of efficient superintendents to advance the movement in every county and in every State. A few circulars and bits of literature have been published on the subject,† and it is certain from the ready response in the United States and Canada, that it is only a question of a little time until the east, the west, the north, the south and the people beyond our boundaries will find in the general establishment of School Savings Banks the solution of several vexed problems. The existence of half a million paupers at an annual expense of \$50,000,000 to our government would be decreased by one-half through the proper inculcation of thrift and education; crime would decrease proportionately. Extravagant, thoughtless habits, which beget inequality, drunkenness and vice, could not thrive if the population was carefully trained to self-knowledge, self-dependence and economy. It is because of the inactivity, the neutral position of woman, in a great measure, that the present state of disproportion

* School Savings Banks was adopted as a department by the National W. C. T. U. at Atlanta, Ga., Nov., 1890. Mrs. S. L. Oberholtzer was appointed superintendent.

School Savings Banks was taken up as a department at the First Convention of the World's W. C. T. U., held in Boston, Mass., November, 1891, with Mrs. S. L. Oberholtzer as superintendent.

† How to Institute School Savings Banks;
A Plea for Economic Teaching;
School Savings Banks;
School Savings Banks' Fact Cards
(numbers 1, 2, 3, 4 and 5.)

} By MRS. S. L. OBERHOLTZER.

exists and I believe the Banking Associations and other organizations right in asking us to unfold our hands.

The school authorities are usually in glad accord with the idea of teaching economy in the schools; the teachers themselves, in most instances noted, are enthusiastic in the work. The children enter with zest into the accumulation of their earnings and savings, while the development of their individuality and self-dependence is a matter of general comment. When the system is about to be instituted the teacher explains to the scholars the end and aim of School Savings Banks, that it is to teach them the practical value of money, how it grows by attention, the benefit of industry, the delight of giving and spending wisely, with other salutary lessons in thrift as opportunity occurs. The roll is called every Monday morning for the collection of the children's savings. This occupies a very short time, even the morning the work is instituted. Each child who is a depositor has the little copyrighted Savings Bank card,* (see next page) on the face of which is his name, that of the teacher and the school. On the back are the regulations. The card is folded and on the inside is the date for each Monday in the school year, with space opposite for amount of deposit.

When the names are called by the teacher each pupil who desires to deposit steps up with his card and money, handing them quickly to the teacher, saying "yes, five cents," or whatever the sum may be. She with a figure credits the amount on the child's card and on her roll book; passing the card back to the child, who keeps it always in hand as a memorandum and receipt. The first collection in the school is deposited in bank as a general school fund. When a scholar has deposited fifty cents or one dollar, as the authorities may agree, he is given a bank book and the money is placed to his personal credit by the bank; when he has three dollars an interest of three per cent. is allowed him

* Although copyrighted permission to use the card is freely given to those wishing to introduce the system.

by the bank, and he has privileges of an adult depositor, acting through school facilities.

The teacher's "roll book" is arranged with spaces to record most conveniently weekly deposits. The other forms

OUTSIDE OF SCHOOL SAVINGS BANKS' CARD.*

"Take care of the pennies and the dollars will take care of themselves."

REGULATIONS.

Deposits will be received every *Monday only*, at the morning session, by the teachers of each school. The amount will be delivered to the

Principal who will deposit it in the

Savings Bank in the name of each depositor.

One cent or upward can be received by the teacher. When a pupil has a deposit of one dollar or more, a bank book will be given, free of charge, from the bank.

Deposits of three dollars and over will bear interest at 3 per cent. per annum

The bank books of the pupils are kept by the Principal or Teacher as long as they attend school. If they leave the school, or at vacation,

the book will be given to them, and they can withdraw their money, but they will require the presence of their father or mother and the signature of the Principal or Teacher. During

summer vacation deposits may be made or money withdrawn from the bank direct, the cashier acting during that time for the teacher;

if the applicant is unknown to the cashier, he must be identified before receiving the money.

"The masses know how to earn better than they know how to save."

"The habit of saving is an essential part of a true practical education."

Copyright to J. H. THURV, Long Island City, 1886.

Privilege to print this card for

is allowed to

by Mrs. Sara Louisa Oberholtzer,

NORRISTOWN, PA.

SCHOOL SAVINGS BANK

—OF—

U. S. A.

Account with

Teacher.

Depositors are requested to keep this card clean, remembering that cleanliness is next to Godliness.

"Good principles and good habits are in themselves a fortune."

* The actual size of the card is 4½x5½ inches.

used in connection with the system are simple and calculated to minimize the work. The money collected by each teacher is placed in an "envelope," which is so printed as to require at her hand but the number of school or class and amount of contents.

There is a "deposit slip" used in forwarding all collections by teacher to principal.

The envelopes in which teachers send the collection to the principal are sealed, the total amount recorded on the deposit slip previously mentioned, which accompanies the envelope. The envelopes are sent together, thus labeled, to the bank, where the bank authorities open, count, verify and credit at leisure.

With the last collection of each month the "Teachers' Monthly list of Depositors" is sent by each teacher to the principal of the school, and by him to the bank with the children's bank books, that individual credits may be properly made. These lists are returned by the bank to the principal with the scholars' bank books during the week. The bank books are given to the children to take to their homes the last Friday of the month, to be returned with the following Monday morning deposits:

Finally a form is necessary by which the principal keeps record of the weekly deposits of the teachers.

The check with which pupils withdraw their money requires the signature of parent or guardian and principal.

The principal uses the General School Fund bank book, received when the first school deposit was made. It is always sent with the week's deposits and returned to him by messenger with full amount of credit. This frees him from responsibility, and the arrangement is such that any error can be at once traced to its source.

The principal or teacher has no power to withdraw money personally. The bank books taken into the homes once a month arouse family interest, and parents have often been interested to curtail needless expenses by the practical lesson in the accumulation of small savings thus taken to them. I

have several examples of this in mind. The children enjoy this instruction which fits them for everyday life and must develop to more self-reliant judicious man and womanhood.

We have given this system a trial for two years in Montgomery County, Pennsylvania, now having it in use in sixty of our schools.* We have heard no disparaging word of it, save from the cigarette and candy venders, who complain that it injures their trade. The teachers express much gratification in the credits of the scholars and have themselves acquired some practical knowledge of banking.

One principal tells me of a boy who was obliged to stop school to learn a trade at fourteen preparatory to family support, but who is so interested in his school fund that he walks to her, one and a half miles, every Saturday evening for a year past with twenty-five cents to add to his account. This boy will doubtless make a provident successful man, and is only one of the many who are being aided through this easy instrumentality to know the value of systematic thrift.

The day after the disastrous flood in Johnstown in 1889, a little fellow went to his teacher in one of the Long Island City schools and said, "How can I send some of my school savings to the poor children who have lost their school houses and everything at Johnstown?" Other pupils expressed the same eager desire to tender help to the needy, when the

* Pottstown, a borough of fifteen thousand inhabitants, has the heaviest deposits for her population in the United States. The Schools, embracing those of Pottsgrove township, are twenty. Attendance 2158; depositors 967, who have collected since the institution of the system \$18,041.29, and after withdrawals of \$8000 have over \$10,000 to their credit. The system was taken up in this borough simultaneously with Norristown, January, 1890. The children's school deposits for the first month in Pottstown were \$1709.17, while in Norristown, with a population of nineteen thousand, 2540 pupils on the register, the deposits for the same period were \$1210.61. These are manufacturing boroughs on the Schuylkill River, and the children have the advantage of good times and town sympathy.

West Chester, Pa., an inland borough of 9000 inhabitants, without great laboring interests, from a register of 892 scholars, has 449 of them as depositors, a greater number in proportion to the school attendance than the average.

Of the schools that took up the work May 9th, 1892, Ashbourne reports first collection \$41.82, Jenkintown first week \$12.73, second week \$16.28.

subject was mentioned, and among the first contributions sent to the sufferers at Johnstown was \$452.31 from the school children of Long Island City. To make up this gift each pupil who wished gave from ten to twenty-five cents from his bank account. It is the possession of individual property only that renders the delight of giving possible.

So far as my study of and experience with School Savings Banks extends, and I have personal acquaintance with most in the States, they do not favor or engender parsimony, but rather beget liberality. I mention this because the fear they might have some tendency in this direction is the only objection I have ever heard advanced to their general institution. A personal visit to any school wherein this practical economy is taught will convince the inquirer of its utility.

The child becomes an active, rather than a passive agent, he is a recognized part of the nation; an individual factor, gaining with his book learning an acquaintance with the principles of thrift, a knowledge wherewith he may solve the problem of daily existence. The average boy and girl who have thus deposited their small savings go out into broader life from the public school, having one or two hundred dollars, perhaps more, to his or her individual credit.

The children of the rich and the children of the very poor perhaps need this economic instruction most, though there are many women and some men in the middle walks of life to-day who cannot without aid make out a bank check and endorse it or give the simplest receipt in form. This instruction gives the children familiarity with these forms, through practical use, with their earliest learning. The children of well-to-do people, who have money given them as regular allowance, have surprised their parents by the amount saved in this manner. In some cases they have kindly given in an unostentatious fashion pennies to school-mates, enabling them to start accounts.

An incentive to increased industry is afforded children, with this avenue open. The prime object, as has been ex-

plained, is not the accumulation of money, but the inculcation of the principles of thrift, honesty and self-responsibility; the upbuilding, through the schools, of prosperity and stability for home and State; the improvement of the organic, social and economical conditions under which we live; the moral and financial welfare of the nation. That this object may be properly accomplished it is necessary that the true purpose and advantage of early saving be impressed upon the pupils, that with the growth of the money the more receptive minds, at least, may be taught its value as a comfort factor, its waste as a frequent harbinger of woe, and its possession as a power for good.

The knowledge that it is not what we get, but what we wisely appropriate, husband and distribute, that counts comes to many of this generation too late in life. Our dependents, spendthrifts and leeches are numerous. Paupers, drunkards, mental and physical wrecks and criminals would decrease materially if their power to increase in numbers was thus discouraged.

Our charitable institutions are becoming so numerous that they are scarcely the flowers of a true benevolence. If we could stimulate the poor to provident habits, and prove to the middle classes the foolishness of spending all as they get it, and to the rich that honest, methodical care of God-given blessings result in greatest enjoyment, we should be exercising a broader and more healthful benevolence. A certain amount of mental discipline and self-denial is necessary to the development of self-dependence.

Victor Hugo said, "All the vagabondage in the world begins in neglected children." Believing this to be, in a great measure, true, and that on account of the frequent incapacity of parents to care for the moral and mental training of their children, the government and the people should tender them the best helps, I ask fuller individual and national consideration of this subject. Our co-operative facilities are far-reaching. School Savings Banks added to the general school curriculum, with fifteen minutes given to their

administration per week would, judging from the advance where they are already in force in this country, and the fuller trial they have had in other lands, yield far reaching results.

When people are able to help themselves, to be individually self-supporting and self-responsible, the equalization of power and means will be attained, resulting necessarily in an evenly balanced and well developed government.

Records of late school meetings in Belgium and Denmark report the Trustees of Public Instruction and School Inspectors as speaking ably to the pupils on improving and keeping in mind through life the lessons of thrift allowed them through the School Banks.

The deposits are all voluntary on the part of the pupils. From one-third to one-half of the scholars in the schools where the system has been introduced become depositors, some making additions weekly, others less frequently. The work is entirely philanthropic, bringing reward to the children, the neighborhoods, and, through them, to the Nation—our Nation; great in its strength; great in its need of purifying and enlarging influence to insure perpetuity as God's Nation.

SARA LOUISA OBERHOLTZER.

Norristown, Pa.

PATTEN'S DYNAMIC ECONOMICS.*

This is the beginning of a great work. The pamphlet contains one hundred and fifty-three pages ; but it suggests several hundred to the reader, and imposes on the writer the necessity of furnishing a still greater number. It is made up of beginnings of studies that call for completion. The field of Dynamic Economics is unlimited, and each pioneer work that occupies a part of it has the effect of making the whole field seem larger.

The economy of progress is unlike that of rest. Advancing societies are under the control of natural laws that have no field of action in stationary societies. Civilization means a perpetual transition from one typical condition to another. Each condition contains in itself forces that tend to create a different condition. A modern industrial state is the result of a long evolution. The forces that have created it have operated from primitive times ; but the state as it stands is not a consummate result. It is not the full fruition of anything. The industry of to-day is not perfected in any particular. There is that about it that calls for change ; and there is in the society itself a more and more active and irresistible impulse to continue the evolution, and to inaugurate changes, if possible, every day. In a sense the consummate result of civilization is this instability ; the best thing about it is the increasing difficulty of rest, the increasing certainty of continuous progress. We struggle toward conditions in which further struggles are inevitable.

There is an economy of rest and an economy of change or transition ; and the two have not been duly separated in scientific studies. They need to be presented one at a time and sharply contrasted ; whereas they have been presented

* THE THEORY OF DYNAMIC ECONOMICS, by SIMON N. PATTEN, Ph. D., Professor of Political Economy, Wharton School of Finance and Economy, University of Pennsylvania. Pp. 153. Philadelphia, 1892.

together and greatly confused. Professor Patten has isolated the dynamic economy by contrasting a progressive society with an unprogressive one. What the one society has and the other has not is the dynamic element.

It is to be noted by the reader that while the stationary society is not under the influence of dynamic laws, the advancing society is under the influence of static ones. Two sets of forces dominate American industry, and the problem to be solved consists in separately tracing the influence of each. The green water on the crest of the Horse-shoe Fall at Niagara is governed by static laws as well as by dynamic ones. If it were not for those forces that are studied under the head of Hydrostatics the falling water would be unable to excavate the rock at the bottom of the abyss into which it plunges. Motion adds one force but does not destroy the other. The most progressive society is, in fact, the one in which static law is most efficient.

In Professor Patten's studies the term static is applied to societies and to persons, as well as to a class of forces. A nation is static when it is not changing, and a man is so when his list of wants is not diversified from time to time. The nation and the man are dynamic when they are progressing. The contrast that the author draws between the two conditions must, in the end, be made to reveal the difference between static law and dynamic law in one condition, that, namely, of a progressive society. In the industrial states in which we are chiefly interested, both sets of forces are in particularly vigorous action.

The clear benefits that accrue to men through industry consist of personal gains secured by income, and not counteracted, in their effect on the man, by the sacrifices entailed in earning the income. They are, in a sense, surpluses. Give to a man enough to make him, on the whole, as well off as he was before he began the work of a day, and no more, and his day's work and its earnings afford no clear benefit. Whatever of gain he receives above what is necessary in order to offset the personal cost of the work is a

surplus. This is a benefit that is not in any way neutralized.

The cost that figures in the problem is subjective. It is the unfavorable effect of industry on men themselves. How much of happiness does a laborer lose by reason of the fact of working ten hours a day for a year? If this question be answered we shall have a statement of the cost of whatever the man produces within that period.

What, then, are the surpluses, or gains unbalanced by costs, that come to men engaged in industry? One of them is the excess of product that is secured by working land of superior quality, as compared with what is gotten from the poorest land in use. Rent is a surplus. The superiority of a piece of good land makes the part of the food supply that comes from it come with less than the standard amount of personal sacrifice. Classical thought is here dominant. Yet the author passes through and beyond the region within which, in their study of rent, the classical writers halted. There is a surplus accruing from the use of other instruments of production than land. Capital affords its net gains, and interest contains a surplus. Dr. Patten has performed the difficult feat of getting beyond the point reached by the older English economists while following their chosen route. He has met and surmounted the major difficulties involved in a profound study of Ricardo. The unnatural gulf that was once made to separate land from capital is closed, in this study, along a considerable part of its length.

Intelligence affords a surplus; and this is the chief one that appears in distinctively dynamic economy. Here is the key to the major problems of production. Thought may make larger and larger our unneutralized gains.

In the main the present study concerns itself with forces that centre in consumption. In social economy it is the consumer who is the dictator. This is true not merely for the old reason that he orders what he will in the market, and the producer must do his bidding. The consumer is, indeed, like the guest at the hotel whose caprices are—in theory at

least—respected by the attendants. What the wishes of the guest are is of primary consequence in determining how much of good he will get from the service, provided that the service itself is perfect. With one list of wants to be satisfied he may get little benefit, while with another he may get much. A favorable change on the character of a man's consumption reacts directly on his well being, and that too without necessarily calling for an enlarged production. The effect of changes in consumption penetrates directly to the recesses of the man's being. It touches springs of personal welfare from which the outward machinery of production must stand aloof. If the mill makes any one really better off by the use of its products it is because the wants to which the products correspond are of the right kind. If we change our social list of wants for the better we take a short cut to happiness. With no more energy expended in production we get a better personal result.

This is equivalent to saying that with a fixed amount of productive force to be used a man does not necessarily get a fixed benefit, since his sensitiveness to the effect of the force can be made greater or less. A proper *varying* of consumption thus multiplies the well-being that is the fruit of industry. In production man works on nature; and the better he works the more there is of modified nature, or wealth, as the result. In consumption nature works on man; and the better the process the more of well being directly results. Dynamic changes in consumption mean this improved working of nature, and mean more and better manhood.

There is a special reason for making now a careful study of this central principle, since through all its applications there runs a conception of cost and of utility that is likely to differ from the reader's conception. One is in particular danger of contradicting Dr. Patten without disagreeing with him, by reason of a differing nomenclature. If a full allowance be made for the author's use of terms, I venture to affirm that the chief conclusions of the work need supplementing, indeed, but not controverting. In secondary

matters there is room for controversy. If we use the terms *cost* and *utility* in one way, the surplus gains that are a chief subject of study appear to exist, though there are new elements yet to be introduced in taking the measure of them. If we use these terms in another sense, one of the varieties of surplus will vanish altogether.

That this point is of importance to the student will appear in connection with the parts of the work that we do not here examine. Surpluses form, as is shown, a fair subject of taxation. In cases where the individual cannot keep them in any case, and where the state can keep them, any tax that may be imposed on this element of gain is, in effect, burdenless to the individual. Evidently it is of cardinal importance to know whether an overplus of gain that is to be drawn on in this way is in reality a clear surplus or not.

Production, as the author strikingly says, is a neglected portion of political economy. What is evidently true, in the department of production as elsewhere, is that the dynamics of the subject have been neglected. The entire process of isolating dynamic forces and effects is a new scientific operation; and the impulse given to this mode of study is an invaluable service of Professor Patten. What needs to be known is the character of those influences that make for better production; and, to that end, it needs at the outset to be known what is at bottom good for the individual consumer. We must make sure what is the exact nature of the ultimate net benefits that may come to a man by reason of changes in production. We must test the surpluses, as before.

In following, then, Dr. Patten's principal analysis, we enter on no less an undertaking than that of attaining a scientific basis for an optimistic faith that is in all of us. The belief that the world is improved is to be demonstrated by scientific formulas and illustrated by diagrams. By closer conformity to the demands of physical law, psychological law and social law, richer and richer returns are to be forthcoming from the collective workshop of the world.

The gains appear on illustrative diagrams that should be as closely tested as those of the mathematician. Certain areas represent gains accruing from industry ; other areas represent sacrifices ; and the excess of the former as compared with the latter represents the net benefit of the process. The change in the lines that makes the area of excess larger represents the dynamic effect that all humanity is seeking. The identification of the causes that thus change the lines and increase the areas of excess is nothing less than an economic solution of the problem of human life. Momentous indeed are the results that hinge, as it were, on the correctness of chalk lines. We must spare no pains in testing them, and at the outset we must make as sure as is possible of their meaning. We must get the author's point of view that we may do full justice to his theory. The result richly repays the effort.

The starting point in the study is man. The facts of his being and of his personal experience afford the premises. Unpleasant experiences constitute true cost, and pleasant ones are gain. There is a reference in the work to old and discarded views of cost. If money paid by an employer constitutes the cost of what he manufactures, it is because the money is an embodiment of value, and the creating of that value has imposed somewhere a personal burden. Wheat consumed by workers can, by a distorted view, be forced into the position of an element of cost, only by virtue of the personal sacrifice that the securing of the wheat has imposed on some one. In a normal view the working and the "waiting," or abstaining that bring a thing into existence constitute the economic cost of it. Man, as the bearer of the burden of production, is back of a commodity as its cause, while man, the consumer, the recipient of good, comes after a commodity as showing in his person its effects. Economics studies men in these two relations ; and the process that the science analyzes is his effort to get more as a consumer than, in his capacity as a producer, he sacrifices.

Some things have "absolute utility ;" which means that

they are of such a nature that we must have them, whether the using of them, gives pleasure or not. Food that nourishes but is so unpalatable that the disagreeable taste of it destroys, in the mind of the man who is eating it, all consciousness of pleasure derived from the operation would afford an illustration of an absolute utility unaccompanied by any other. A drug capable of saving life, but not pleasant to the taste, would fall in the same category ; while if the same drug were nauseous but quite necessary for the patient, it would have, besides the absolute utility, a negative utility due to the discomfort that comes from taking it. It is immediate pleasure giving power that constitutes the second variety of utility, and it is this with which Professor Patten's analysis is mainly concerned. The utility of a coat is measured by the pleasure a man gets from wearing it. If there is a patch on it this pleasure may be more than neutralized ; it may be turned into actual pain. Yet the man may continue to wear the garment because of its absolute utility. It is a thing that he must have, though it never ceases to annoy him.

It is at this early point in the author's study that the difference between his thought and that of others needs to be noticed. In this special conception of utility there is enough to set Dr. Patten seemingly at variance with others on the subjects that he is about to treat. A thing that is useful but painful in the using has, in this study, two kinds of utility, of which one is absolute and the other is negative. In the commoner view such a thing has its degree of utility, like anything else ; but in estimating the degree the owner takes into account all effects, whether pleasant or unpleasant, that come from the using of it. The unpalatable food, the nauseous drug, the dentist's forceps and the surgeon's knife have a degree of real usefulness that is capable of being approximately estimated. How much better off, on the whole, is a man who utilizes one of these things than he would be if he let it alone ? If he can answer this question he has assigned the article to its proper place in the scale in

which commodities are mentally tabulated. The pain that comes from the use of the commodity, as well as the prolonged well-being that follows, are allowed to have their due importance in the estimate.

The surplus gains come from pleasure-giving articles. Every dinner includes bread or its equivalent; not every one, in the summer, includes ices; and in the pleasure derived from articles like these lies the difference between one dinner and another. Unnecessary but desirable things constitute the surplus of the consumer.

The standard from which the surplus is measured, the personal cost of getting these things, needs to be even more carefully scrutinized. It is here that there lies a special danger of misunderstanding and unnecessary controversy. A part of this surplus vanishes if we estimate cost in one way; it remains if we take the author's mode of estimating it.

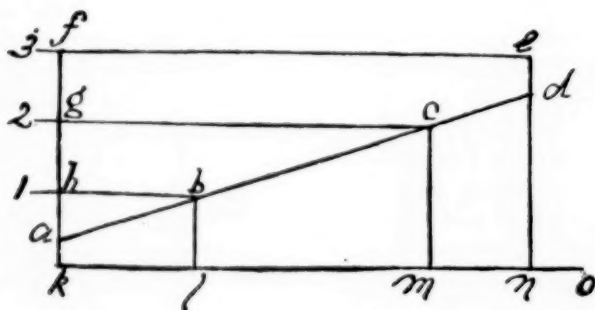
In Dr. Patten's view the cost in the case is the sacrifice directly involved in the securing of the pleasure-giving articles. The ices in the illustration give a pleasure that is not fully offset by the labor that is expended in paying for them. If a workman can earn a dime by a half-hour of extra labor, and if the ice that completes his dinner gives a pleasure that more than offsets the pain involved in this labor itself, then there is an overplus of benefit due to earning the ice and eating it. The cost in the case is the extra burden entailed by the final half-hour of labor. If we accept this idea of cost, we accept with it many important deductions. If we adopt another conception of cost we reach different conclusions, and, in particular, we find that a definite part of the surplus gains that are traced through the industrial process altogether vanishes.

There are indirect effects of labor to be taken into account, and they neutralize the overplus of benefit derived from the ices. These articles stand for the "final increment" of consumption, and this increment is worth what, directly or indirectly, it costs. The dish that the man, in the illustration,

hesitates in ordering may give pleasure enough to more than offset the fatigue of working to pay for it; and yet it may yield no surplus above its total cost.

The earlier hours of a working day are but slightly onerous; and the burden of work increases as the period of labor is prolonged. At some point, say at the end of the tenth hour, the man if he is free and is working by the piece, will voluntarily stop. Why does he quit work at exactly this point? Because, in his view, there is no real net benefit to be had from working longer. The work in some way deducts from his well-being as much as the articles bought with the wages of the work add to it. The man grinds knives or pegs shoes till the piece price of another bit of work, transformed into a newspaper, a picture, a ticket to the theatre, or a glass of soda water or of whiskey, according to the man's habitual mode of valuation, offsets the entire sacrifice involved in doing the bit of work. Labor naturally stops where, by the common mode of thought, true surplus gain vanishes. Yet Dr. Patten finds a surplus accruing from the last and hardest increment of labor; and this surplus is a central element in much of the following reasoning. The existence if it depends on the use of a special conception of cost, is the standard above which the surplus is measured.

We may best reveal the character of this excess of gain by reproducing the diagram and quoting the text that describes it.



After stating that a man naturally stops working when the pain of the last period of labor equals the utility of the last increment, Dr. Patten finds a reason why, in a highly efficient state of industry, this rule of equality of gain and sacrifice does not actually hold true, in so far as the final increments of the two are concerned. The last increment of gain more than offsets the mere pain of the last period of labor.

"We may imagine the pain of each increment of production to be represented in the above figure by the distance from the lines ad and kn , while the marginal increment of consumption is measured on the line kf , and the length of the working day on the line ko . When the marginal increment of consumption represents one unit, and is measured by kh , the length of the working day will be kl , and the marginal increment of production will have its pain measured by bl . When, however, the marginal increment of consumption is increased to two units, kg , because of an increase in the variety of consumption, the length of the working day will be increased to km , and the pain resulting from the production of the last increment will be mc . Let the changes in consumption continue until its marginal increment is three units, kf , and the time of the working day would be extended to ko , while the pain of the last increment of production would equal kf if no new motives enter to influence the producer.

"When, however, the productive power of society has increased beyond a certain point, the efficiency of the workman becomes so great that *the time needed to consume what he has produced cuts into the time needed for production*, he ceases to work before the pain of the last increment of production equals the utility of the last increment of consumption. There is for the efficient workman a surplus at the margin of production, * * *

The italics are mine, and the passage thus emphasized marks the point in the argument at which the special conception of cost must be introduced. With that view of

cost, the following argument will not be declared incorrect, but it will have a significance that the reader must think closely in order to fully understand. If the other view of cost were used, there would be an element of incorrectness running through the entire remainder of the theory.

The man whose action the diagram describes stops working at the point *n*, and there the pain of work is *nd* and the resulting gain is *ne*. The line *de* represents the excess of pleasure not offset by pain, or the surplus gained by the last period of work. This line *de* has no existence if cost be estimated in the way that makes it include the whole of the sacrifice entailed by labor.

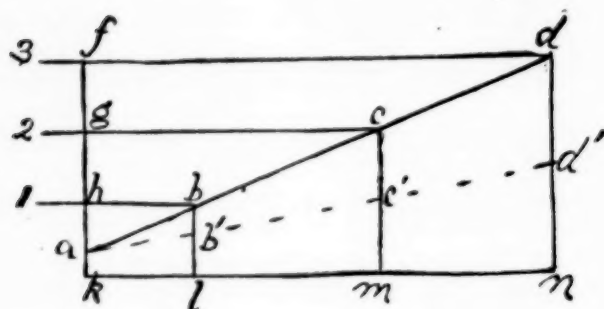
It may well be that the last hour of labor in a day secures to the worker something that, in itself alone, is worth to him more than it costs in the way of mere fatigue; but if the gaining of it entails an imperfect utilization of other things already in possession then the acquisition of it may not be profitable. It will afford no surplus. Let us say that A, B, C and D represent the articles that the man buys with his daily increase, and that, in order to get them all he must work ten hours. It is conceivable that D, the last thing purchased, may, in itself give more in the way of pleasure than the tenth hour inflicts in the way of pain; and yet it may be unprofitable to work through the tenth hour and secure the article. With only A, B and C in his possession at the end of the ninth hour of work, the man may be as well off as he would be with A, B, C and D at the end of the tenth. The extra hour of leisure adds to the subjective value of A, B and C. For the man himself this hour available for more fully utilizing these things actually puts utility into them. The loss of the hour takes utility out of them. The gain secured by the possession of D is not the entire service that this article in itself can render; it is this service minus a sum that represents the diminished service now rendered by A, B and C. There is a surplus secured by working for the article D; but that surplus is annihilated by the diminished service that the other articles

now render. This diminution is a cost, and this it is that prevents the work from being continued.

This fact, stated in another way, reveals a principle to which increasing interest and importance attaches as the industrial process perfects itself. The sacrifice involved in labor itself is coming to be largely *abstinence*. Confinement rather than fatigue is the cause of it; and this confinement burdens the man by that withdrawing of utility from things already in his possession to which attention has just been called. To the man who is confined for most of his waking time nothing is really worth what it should be, and some things are worth very little. He cannot utilize them. Though he may have them in his house he is kept from enjoying them. The man who works twelve hours a day is the typical abstainer of our modern economy. The saddest feature of his abstinence is that it is practiced on things that he actually possesses. He abstains from the full use of his house, his garden and his furnishings and decorations. He foregoes much of the enjoyment of his books and papers, and even of the comelier part of his wardrobe. He has little time for wearing good clothes, for sitting on porches in summer, or before fire-places in winter. He lacks leisure for reading, etc.

What is worse, this lack of time takes the essential utility out of the free gifts of nature. It puts a blight on air and sunlight. It spoils, for this particular man, the trees, the streams, the hills, etc. "We want to see the sunshine," the worker is made to say, in a somewhat familiar rhyme that expresses the motive of the eight-hour movement. It is the increase of utility that, for the men engaged in this struggle, two extra hours of leisure would infuse into their entire environment that is the real object to be secured. This man wants to make the sun worth something.

We can illustrate this by a modification of the author's diagram.



The ascending line $a d'$ now represents that which, in the unmodified figure was represented by the line $a d$, namely, the increasing onerousness of the mere physical or mental effort of prolonged labor. The increasing length of the lines $l b$, $m c'$ and $n d'$, means that, as the man becomes more and more weary, each hour of work imposes a more and more painful effort. Muscular tissue, nerve tissue and brain tissue are destroyed, by the continued labor, in amounts that impose more suffering and demand more rest, as the hours of work, measured on the line kn are prolonged.

This destruction of tissue, however, is only one part of the sacrifice imposed by the work. Every hour of routine labor restricts the man's pleasurable activities. He sees somewhat less of the sunshine by reason of entering the shop for a stay of so much as three hours; and though this effect is not a striking one where the working day is thus curtailed, it becomes more and more prominent as the duration of it increases. $b b'$, $c c'$ and $d d'$ in the modified diagram stand for the sacrifice of confinement; and $l b$, $m c$ and $n d$ represent the total sacrifices involved in the final increments of labor in three working days of different lengths. The sacrifice of confinement resolves itself, in the analysis, into special and burdensome abstinence entailed by labor. The worker gives, in current phrase, "time and effort" to production; and in giving his time he incapacitates himself for the full utilization of the good things about him. The wealth

that he has in house, garden, furnishings, books, etc., as well as the free goods that nature lavishes on the human family, are worth less, in his subjective valuations, than they otherwise would be. Everything loses utility, and the lines $b'b$, $c'c$ and $d'd$ measure the depreciation of value that the man's whole environment suffers when he gives to the confined work of the shop the hours that he might use, as it were, in absorbing happiness. The "lavish summer" is at hand; but the man cannot get much good out of it.

There is a similar effect coming from the multiplying of articles of consumption, that would need to be noticed in a full analysis. Loss of time through excess of work may curtail a man's enjoyment of the commodities A, B, C and D; but the addition of E to the list may have, in some degree, the same effect. The child with many toys takes little pleasure in the earlier ones, while the child with a single toy gets all that is to be gotten out of it. The man of to-day with many books does not get as full use of the two or three volumes that constitute the nucleus of his library as one of his ancestors would have done, in the simple colonial days when these few volumes were all that there were to be had. Even consumption takes time and strength, and it cannot be made to include too many articles without some sacrifice of the benefit that it is possible to get from each. The enjoyment derived from the final one is, as Professor Patten has well shown, increased by the fact that it is different in kind from the earlier ones. Variety of goods works favorably for the consumer; but mere number works partly unfavorably, since the addition of each new one to the list withdraws time and strength from the consuming of earlier ones. If a man has a thousand books it is decidedly better that they should not be duplicates; but even if there is not a duplicate in the list, the number itself takes from the value of each separate one. This effect is made familiar by modern studies of value; but the last word concerning it has yet to be said. It is a great merit of Dr. Patten's study that, side by side with the effects known to fol-

low from increased quantity of goods consumed, he has placed the redeeming fact that wholly opposite effects are to be expected from increased variety.

We may suppose that in our illustrative diagram the lines *kh*, *kg* and *kf* are drawn with a full knowledge of all these effects. They represent the total good that comes to a consumer with increasing wages at his disposal, from the final increments of this consumption. In that case this total good coming from the last earnings of a normal working day will just equal the total sacrifice of the last increment of labor. The man will stop working at the point at which, on considering every element that enters into the problem, he is gaining by consumption exactly as much as he is losing by production. The last minute of work in the free laborer's normal day is a no-surplus minute.

The essay that we are discussing will, as all readers must earnestly hope, expand into a volume of ample dimensions. A catalogue of the points that are capable of such expansion would unduly prolong this notice. It is, for the reader, an exercise of rare value to expand them in his own mind as he proceeds. Even the question whether, when fully expanded, the deductions are all to be approved or not is a secondary one. Science is advanced, ultimate truth is brought nearer, by reason of all acute and suggestive studies that enter this new and fruitful field. When fully stated and amply tested the author's studies will be found to have attained very much of this truth. Not to be weighed, for importance, with any ordinary scales are the conclusions of this theory, since they tell us how and to what extent the working millions are to gain by progress. Let the studies be quickly extended that will afford such a prognosis. Let economic science do its work and gauge the weal of the future by its diagrams.

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GEOMETRICAL THEORY
OF THE
DETERMINATION OF PRICES.*

Translator's Note.

The following article of Professor Walras is the first by that famous writer to appear in English. It is not too much to say that Professor Walras, together with Jevons and Menger, marked an epoch in political economy. These three writers independently and almost simultaneously developed and applied the idea of *rareté* or marginal utility, the corner-stone of the so-called "Austrian School" and of mathematical economics. Those who are not already familiar with the services which the *Économie Politique pure* has rendered will be interested to read the praise of Jevons (Theory of Pol. Econ. 3d Ed. Preface to 2d Ed. p. xxxviii.).

The problem which Professor Walras has here set himself is a difficult one, viz. : to present a geometric picture of the causation of the prices of *all* commodities, recognizing the fact that these prices are mutually dependent. I have never seen it attempted elsewhere. In his *Économie Politique pure* he treated this problem analytically and was, I feel confident, the first to do so. Auspitz and Lieben also in their much praised "*Untersuchungen über die Theorie des Preises*" use their ingenious diagrams only for a single commodity and content themselves with an analytical treatment as soon as they pass to several commodities. The present writer is about to publish in the transactions of the Connecticut Academy of Arts and Sciences a *Mathematical Theory of Value and Prices*, in which is a solution of this same problem, by the aid of an instrument quite different from either the analytic or graphical method. An actual mechanism is constructed so as to exhibit the complex market adjustment as an automatic equilibrium of a system of liquids.

* Of the three parts of which this paper is composed, the first consists of a memoir read before the Society of Civil Engineers of Paris, October 17, 1890, printed in the *Bulletin* of that Society, January, 1891. In it the author has, however, made certain modifications, of which one is rather important, because it simplifies the fundamental demonstration of the theorem of maximum satisfaction. The last two consist, with certain modifications necessitated by what preceded, of a paper prepared for the *Receuil inaugural* of the University of Lausanne. The editors of the *Receuil* kindly authorized the transmission of the MS. of this article, previous to its publication in Lausanne, to the *American Academy of Political and Social Science*, with a view to insertion in its ANNALS.

A few words of comment on the present article *may* be appropriate :

(1) Although Professor Walras clearly recognizes that the demand and supply of each commodity is a function of the prices of all commodities, he omits to state that the *rareté* to a given individual of a given amount of one commodity is a function of the quantities not only of that commodity, but of all others. Hence the curves he employs are not independent, but the shape of the A curve in Fig. 1 will change according to what point is selected on the B curve. The A curve could not be said to be given until the demand for B, C, D, etc., was each given. The utility of bread, it is true, decreases with the amount of bread, but the *law* of that decrease depends on the amount of butter; in general the utility of the same quantity of bread increases as the amount of butter increases.

(2) With a slight change of phraseology the methods and curves used by Professor Walras would apply to the *rate* of consumption in time. Thus the quantities Oq_a , Oq_b , Oq_c , etc. (Fig. 1), could be taken to mean the amounts of each commodity *annually* produced by the given individual and disposable for consumption and exchange. The vertical length, used in Fig. 2, $q_a + q_b p_b + q_c p_c + \text{etc.}$, would then indicate his annual income measured in terms of the commodity A. I am aware that many economists object to such an introduction of the time element, but their objections disappear as soon as the notion of a statical market is admitted. To limit price analysis to a single instant and the supply to the amounts of stock then on the market, unnecessarily restricts its range of application, and "dealing in futures" makes its meaning vague. What can be meant by the amount of petroleum on the New York market at an instant? Many gallons are flowing through pipes and in twenty-four hours more than a million gallons will be added. The *rate* of production and not the stock is the well defined quantity, and so with all staple articles.

(3) Professor Walras goes unnecessarily out of his way in making his special supposition that in order to have a common cost price equal to the selling price suppliers must produce equal quantities (by which presumably is meant equal quantities per unit of time). The rate of production regulates the cost of production, that is, the *marginal* cost or sacrifice, and it is quite possible for this marginal cost (measured in money) to be the same for a small cobbler as for a large shoe manufacturer, though the fixed and running expenses may divide themselves very differently. Moreover, it is rather misleading to say that the equality of [marginal] cost and selling price implies neither gain nor loss. There exists a normal gain or "producer's rent," as Marshall calls it, which is quite distinct from and inde-

pendent of any speculative gains or losses, $\Omega_b (\pi'_b - p_b)$ etc., due to a disturbance of the equilibrium between cost and selling price.

IRVING FISHER.

I.

THE EXCHANGE OF SEVERAL COMMODITIES AMONG THEMSELVES.

In my *Eléments d'économie politique pure*,* passing from the theory of the exchange of two commodities to the theory of the exchange of several commodities among themselves, and seeing that in that case the demand or the supply of each of the commodities by each of the traders is a function, not only of the price of that commodity, but also of the price of all the others, I believed it was necessary to adopt exclusively the analytic method of expression and do without the help of diagrams. But since then I have found a means, which I will indicate briefly, of elaborating the theory in question by the method of geometrical representation.

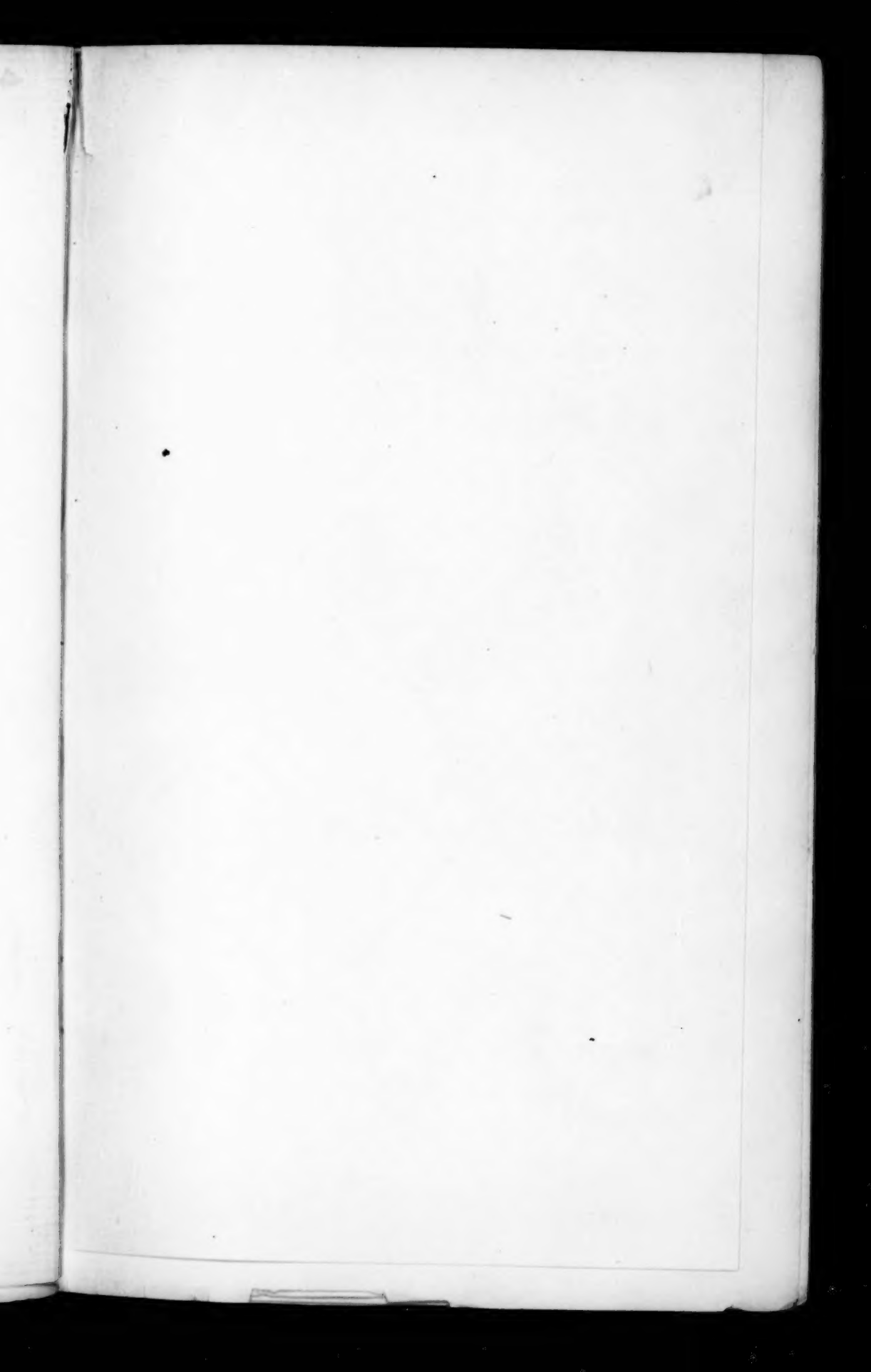
Suppose a party to the exchange with the quantities $q_a, q_b, q_c, q_d \dots$ of the commodities (A), (B), (C), (D), represented by the lines $Oq_a, Oq_b, Oq_c, Oq_d \dots$ (Fig. 1) and having for him the utility expressed by the curves $\alpha_q \alpha_r, \beta_q \beta_r, \gamma_q \gamma_r, \delta_q \delta_r \dots$. I proceed to describe these curves which are the essential and fundamental basis of all the mathematical theory of social wealth.

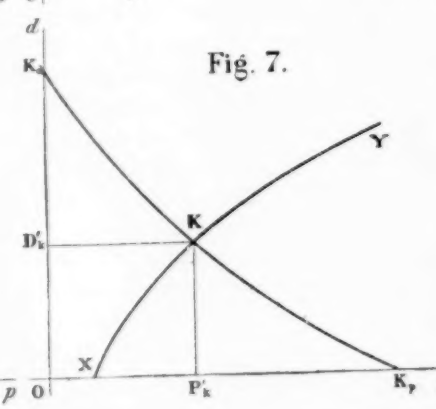
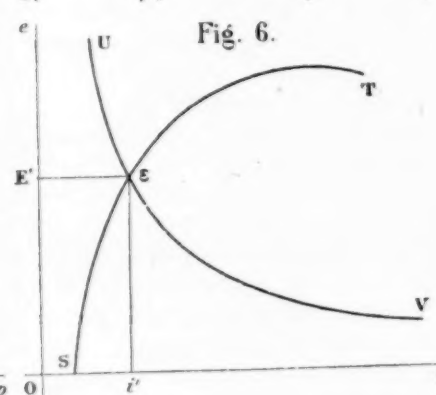
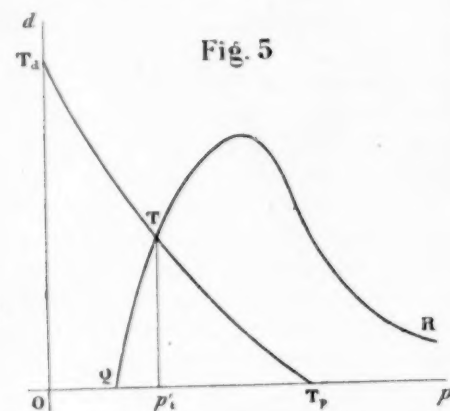
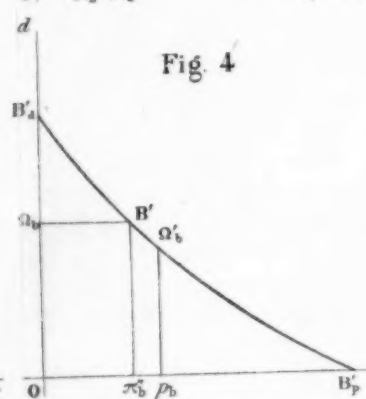
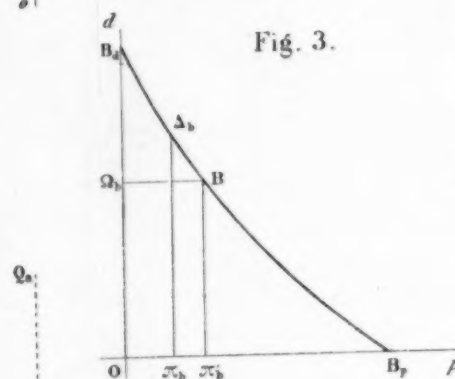
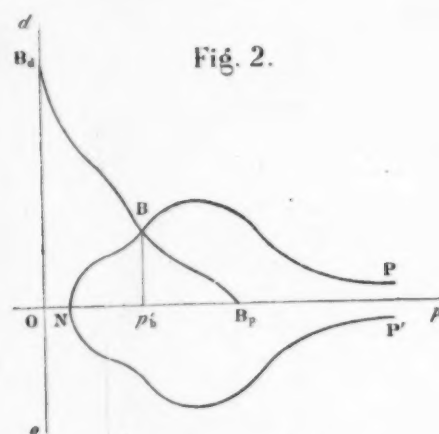
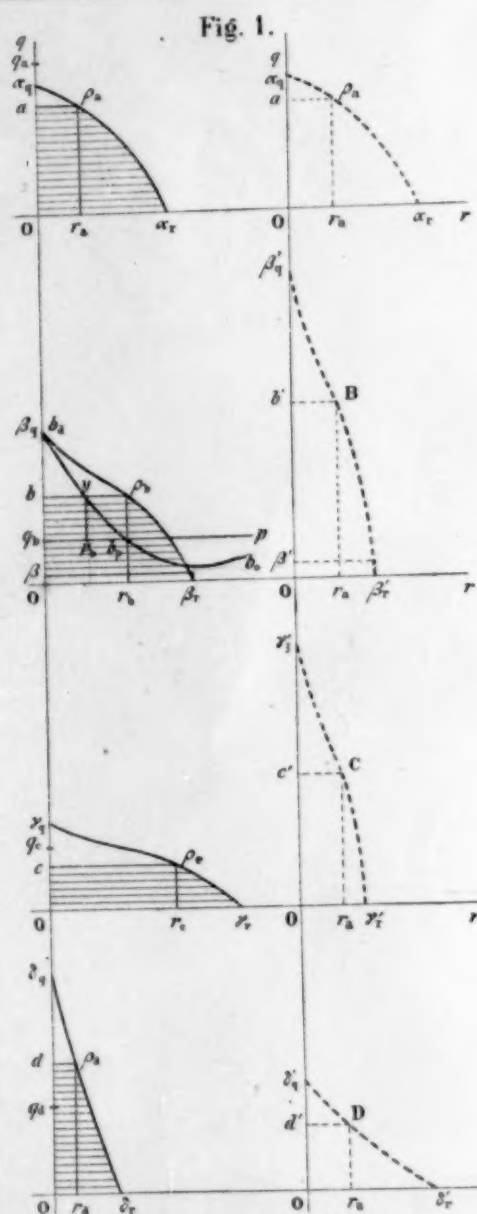
We may say in ordinary language: "The desire that we have of things or the utility that things have for us, diminishes in proportion to the consumption. The more a man eats, the less hungry he is; the more he drinks, the less thirsty; at least in general and saving certain regrettable exceptions. The more hats and shoes a man has, the less need has he of a new hat or a new pair of shoes; the more horses he has in his stables, the less effort will he make to procure one horse more, always neglecting the action of impulses which the theory has the right to neglect, excepting when accounting for certain special cases." But in mathematical terms we say: "The intensity of the last desire satisfied, is

* Lausanne, F. Rouge. 1889.

a decreasing function of the quantity of commodity consumed," and we represent these functions by curves, the *quantities consumed* by the ordinates and the *intensity of the last desire satisfied* by the abscissas. For example, take the commodity (A), the intensity of the desire of our consumer which would be Oa_r at the beginning of the consumption, would be nil after the consumption of a quantity Oa_q , the consumer having then arrived at satiety. That intensity of the last desire satisfied, for the sake of brevity, I call *rareté*. The English call it the *final degree of utility*, the Germans *Grenznutzen*. It is not an appreciable quantity, but it is only necessary to conceive it in order to found upon the fact of its diminution the demonstration of the great laws of pure political economy.

For the present let $p_b, p_c, p_d \dots$ be the prices of (B), (C), (D), in terms of (A) determined at random on the market. The first problem that we have to solve consists in determining the quantities of (A), (B), (C), (D) \dots , $x, y, z, w \dots$ the first positive and representing the quantities demanded, the second negative and representing the quantities offered, which our trader will add to the quantities q_a, q_b, q_c, q_d , of which he is already possessed or which he will subtract from them, so as to consume the quantities $q_a + x, q_b + y, q_c + z, q_d + w \dots$ represented by the lines $Oa, Ob, Oc, Od \dots$. Just as we employed the general hypothesis above, of a party to the exchange for whom the *rareté* decreased with the quantity consumed, so here we employ the general hypothesis of a party to the exchange who seeks in the exchange the greatest possible satisfaction of his desires. Now the sum of the desires satisfied by a quantity Oa of commodity (A), for example, is the *surface* $Oap_a a_r$. The *effective utility* is the integral described by the *rareté* in relation to the quantity consumed. Consequently the problem, whose solution we are seeking, consists precisely in determining $Oa, Ob, Oc, Od \dots$ under the condition that the sum of the shaded areas $Oap_a a_r, Obp_b \beta_r, Ocp_c \gamma_r, Odp_d \delta_r \dots$ be a maximum.





In order to furnish that solution very simply in the geometric form, I subject the curves of utility or desire $\beta_q \beta_r$, $\gamma_q \gamma_r$, $\delta_q \delta_r$. . . to the following transformation. I lay off from the origin O, upon the horizontal axes, the new abscissas equal to $\frac{1}{p}$ of the old abscissas. Also, upon the parallels

to the vertical axes drawn through the extremities of the new abscissas, I lay off from the horizontal axes the new ordinates equal to p times the old ordinates. In the figure,

$p_b = 2$, $p_c = 3$, $p_d = \frac{1}{2}$. . . As is easily seen, the new

curves $\beta'_q \beta'_r$, $\gamma'_q \gamma'_r$, $\delta'_q \delta'_r$. . . represent the utility of (A), as spent for (B), for (C), for (D) . . . , or, in other words, the desire the exchanging party has of (A), in order to procure some of (B), of (C), of (D) . . . In short, if we consider the areas $O\beta_q \beta_r$, $O\gamma_q \gamma_r$, $O\delta_q \delta_r$. . . as the limits of sums of rectangles infinitely small, we may consider the surfaces, $O\beta'_q \beta'_r$, $O\gamma'_q \gamma'_r$, $O\delta'_q \delta'_r$, as the limits of *equal* sums of rectangles infinitely small, each base being p times less, and each height p times greater. Now, each of the rectangles of the former sum represents the effective utility of an increment of commodity; each of the rectangles of the latter sum represents, in the same way, the equal effective utility of the p increments of (A), with which that increment of commodity may be bought.

The curves $\alpha_q \alpha_r$, $\beta'_q \beta'_r$, $\gamma'_q \gamma'_r$, $\delta'_q \delta'_r$, being placed beside each other, I take a vertical length OQ_a , representing the equivalent in (A) of the quantities q_a , q_b , q_c , q_d , of (A), (B), (C), (D) . . . at the prices 1, p_b , p_c , p_d . . . viz: $q_a + q_b p_b + q_c p_c + q_d p_d + \dots$ and I advance it from right to left, in order to satisfy the varying desires in the order of their intensity, until it is sub-divided among the curves into the ordinates $r_a p_a = Oa$, $r_a B = Ob'$, $r_a C = Oc'$, $r_a D = Od'$, . . . corresponding to a like abscissa. Now, that abscissa Or_a will represent, in terms of (A), the *rareté* of (A), of (B), of (C), of (D) . . . say, r_a , corresponding to the maximum of effective utility. The ordinates Oa , Ob' , Oc' , Od' . . . , will represent, in terms

of (A), the quantities to be consumed, of (A), of (B), of (C), and of (D), the only commodities to be consumed being those for which the intensity of the first desire to be satisfied is greater than r_a .

If we carry back the abscissas $Or_a = r_a$, $Or_b = p_b r_a$, $Or_c = p_c r_a$, $Or_d = p_d r_a$, . . . to the curves $a_q a_r$, $\beta_q \beta_r$, $\gamma_q \gamma_r$, $\delta_q \delta_r$, . . . we obtain the ordinates Oa , Ob , Oc , Od , . . . representing the quantities of (A), of (B), of (C), of (D), . . . to be consumed. And so, *in a state of maximum satisfaction, the raretés are proportional to the prices, according to the equations:*

$$\frac{r_a}{1} = \frac{r_b}{p_b} = \frac{r_c}{p_c} = \frac{r_d}{p_d} = \dots$$

Thus it is, that, given the quantities possessed and the utilities of the commodities, we determine for a party in the exchange the demand or supply of each of the commodities at prices taken at random, which will afford the maximum satisfaction of his wants.

Having given the demand and supply of commodities by all the parties in the exchange at prices taken at random, it remains to determine the current prices at equilibrium, under the condition of the equality of the total effective demand and supply. The solution of the second problem may also be furnished geometrically.

Let us, for an instant, neglect p_c , p_d , . . . and seek at first to determine, provisionally, p_b . And, for that purpose, let us inquire how (p_c , p_d , . . . being supposed constant) the variations of p_b influence the demand and supply of (B).

If y is positive, that is to say, if the trader is in need of (B), an augmentation of p_b can only diminish y . In short, if he takes at a higher price an equal quantity, he still owes a difference which he cannot pay, without diminishing the quantities of (A), (C), (D), . . . But, then, he will augment the *raretés* of these commodities; and, in consequence, the condition of maximum satisfaction will be less perfectly fulfilled. Hence, the quantity y is too great for a price higher than p_b .

If y is negative, that is to say, if the party is a supplier of

(B), there are three possible results. The party, being supposed to supply an equal quantity at a higher price, a surplus is due him, and, by means of that surplus, he can augment his quantities, and consequently diminish his *raretés* of (A), (C), (D). . . Then, one of three things occurs: Either the surplus is insufficient to re-establish the condition of maximum satisfaction, or it is just sufficient, or it is more than sufficient; and, in consequence, at a price higher than p_b , the party must supply a quantity of (B), either greater than, equal to, or less than y . It is certain, that he will find himself in one of these three cases, according to the amount of the enhancement of p_b . For, if, on the one hand, that enhancement of p_b constantly diminishes the ratio $\frac{r_b}{p_b}$ by increasing the denominator, that same increase of p_b admits, on the other hand, of a continual lowering in $\frac{r_a}{p_a}, \frac{r_c}{p_c}, \frac{r_d}{p_d} . . .$ by a diminution of the numerators $r_a, r_c, r_d, . . .$ which may finally cause a decrease of the numerator r_b itself. ?

The variation of p_b , from zero to infinity, therefore, causes the party to the exchange to pass from the side of demand to that of supply; then, from an increasing supply to a decreasing supply. At the price zero, the demand is equal to the excess of the quantity necessary perfectly to satisfy the wants over the quantity possessed; at the price infinity, the amount offered is nil. In the case of the exchange of several commodities, as in the case of the exchange of two commodities with each other, the tendencies may be represented geometrically, for a party to the exchange, by a curve* $b_a b_p b_o$. (Fig. 1).

* [The ordinates of this curve have the same meaning as the ordinates of the utility curve for (B) on which it is superposed, but its abscissas represent the price of (B) in terms of (A.) Thus in order that the individual may consume Ob , that is buy $q_b b$ in addition to his original stock Oq_b the price must be $b y$ (in this case 2). If the price rises above $q_b b_p$ he ceases to buy and begins to sell. But the curve

All the parties to the exchange being not identical, but similar in their tendencies, as far as concerns the commodity (B), it is clear that all the partial curves of demand must be united† in a total curve that continually decreases, $B_d B_p$ (Fig. 2), and all the partial curves of supply in a total curve NP , successively increasing and decreasing, from zero to zero, if we take it positively, by making NP' turn around the horizontal axis, so as to bring it to the position NP . The abscissa Op'_0 , of the point of intersection B of the two curves $B_d B_p$ and NP , will be provisionally the current price at equilibrium for which the total effective supply and demand of (B) will be equal. Furthermore, the intersection of the two curves, $B_d B_p$ and NP , may take place either when the second curve rises, or when it falls.

It follows from the nature of the curves, that we shall obtain the provisional current price of (B) by raising it in case of a surplus of effective demand over effective supply, and lowering it, on the contrary, in case of a surplus of effective supply over effective demand. Passing then to the determination of the current price of (C), then to the current price of (D) . . . , we obtain them by the same means. It is quite true that, in determining the price of (C), we may destroy the equilibrium in respect to (B); that, in determining the price of (D), we may destroy the equilibrium in respect to (B), and in respect to (C), and so on. But, as the determination reaches a minimum point and then approaches $q_0 p$ as an asymptote. That is as the price rises beyond a certain point, he ceases to stint himself in the enjoyment of (B) and parts with less and less of it. —TRANSLATOR.]

† [The total demand curve for (B) ($B_d B_p$ Fig. 2) may evidently be found from the partial curves such as $b_a b_p b_0$ by selecting on these individual curves the points which correspond to a given abscissa (price) and constructing a corresponding point in the total curve which shall have the same abscissa, but whose ordinate shall be the sum of the ordinates of the individual curves measured above $q_0 p$ as yp_0 . In like manner the ordinates of NP' are the sum of the individual ordinates measured below $q_0 p$ and corresponding to like abscissas. —TRANSLATOR.]

nations of the prices of (C), (D) . . . in respect to the demand and supply of (B), will result in a contrary way, we shall always be nearer the equilibrium at the second trial than at the first. We enter here on the theory of trial and error, such as I have developed in my work, and by virtue of which *we arrive at the equilibrium of a market by raising the price of commodities, the demand for which is greater than the supply, and by lowering the price of those, the supply of which is greater than the demand.*

It is due to the concurrent employment of analytic expression and geometric representation that we have here, in the case of the exchange of several commodities among themselves, not only the idea but the picture of the phenomenon of the determination of prices upon the market. And with this, it seems to me, we possess at last the theory. Some critics, however, laugh at the number of pages I use in demonstrating that we may arrive at a current price by raising in case of an excess of the demand over the supply, and lowering in case of an excess of the supply over the demand. "And you," I said once to one of them, "how do you demonstrate it?" "Well," he answered me, a little surprised and embarrassed, "is there any need of demonstrating it? It seems to me self-evident." "There is nothing evident except axioms, and this is not an axiom. But one naturally follows the mode of reasoning which Jevons has formulated so clearly in his little treatise on *Political Economy*, that a rise, making necessarily a diminution of the demand and an augmentation of the supply, causes equality in case of a surplus of the one over the other." "Precisely." "But there is an error there. A rise necessarily diminishes the demand; but it does not necessarily augment the supply. If you are a supplier of wine, it may well be that you supply less at a million, than at a thousand francs, less at a billion than at a million, simply because you prefer to drink your wine yourself, rather than use the surplus which you could procure by selling it beyond a certain limit. The same is true of labor. We easily

conceive that a man, who supplies ten hours a day of his time at the price of one franc an hour, would not supply more than four at the price of 10 francs, or than one at 100 francs. We see, every day, in the large towns, that the laborers, when they earn 20 or 25 francs a day, do not work more than three or four days a week." "But if that is so, how is raising it a means of reaching the current price?" "It is this that the theory explains. Two individuals, who have separated, may meet again, either by moving each, in an opposite direction to the other, or by one going faster than the other. Supply and demand equalize themselves, sometimes in one way, sometimes in another." | Is it not worth while to demonstrate rigorously the fundamental laws of a science? We count to-day I do not know how many schools of political economy. The *deductive* school and the *historical* school; the school of *laissez-faire* and the school of *state-intervention*, or *socialisme de la chaire*, the *socialistic* school properly so-called, the *catholic* school, the *protestant* school. For me, I recognize but two: the school of those who do not demonstrate, and the school, which I hope to see founded, of those who do demonstrate their conclusions. It is in demonstrating rigorously the elementary theorems of geometry and algebra, then the theorems of the calculus and mechanics which result from them, in order to apply them to experimental ideas, that we realize the marvels of modern industry. Let us proceed in the same way in political economy, and we shall, without doubt, succeed in dealing with the nature of things in the economic and social order, as they are dealt with in the physical and industrial order.

II.

THE EXCHANGE OF PRODUCTS AND SERVICES WITH EACH OTHER.

It is my present purpose to apply to the theory of production and the theory of capitalization the exclusively geometric method of demonstration according to which I have sketched the theory of exchange in the preceding paragraph.

Now, in formulating the theory of exchange, we suppose the quantities of the commodities to be a given, not an unknown element of the problem. To begin with, in order to arrive at a theory of production, it is necessary to consider commodities as the products resulting from combined productive services, and, in consequence, it is necessary to introduce the quantities of manufactured products into the problem, as so many unknown quantities, adding as is proper, an equal number of determining mathematical conditions. That is what I wish to do here, referring to my *Elements of pure political economy* for definitions and notations.*

Suppose, then, the services of land, labor and capital [in the narrow sense] (T), (P), (K) . . . susceptible of being utilized, either directly as consumable services, or indirectly as productive services, that is to say, in the form of the products of the sorts (A), (B), (C), (D) . . . The first problem that we have to solve consists in determining, for each consumer, the supply of services and the demand for services, either in the form of consumable services, or as products. Now the solution of the problem is furnished us by the theory of exchange.

Given, then, a consumer possessed of the quantities q_t, q_p, q_k , of the services (T), (P), (K) . . . and having a desire for these services and a desire for the products, (A), (B), (C), (D) . . . expressed by the curves of utility or desire. Given, also, $p_t, p_p, p_k \dots \pi_b, \pi_c, \pi_d, \dots$ the prices (taken at random) of (T), (P), (K) . . . and of (B), (C), (D) . . . in terms of (A). We will transform the curves of utility or desire of services and products into curves of utility (measured in (A)) of (T), (P), (K) . . . (B), (C), (D) . . . or, in other words, into curves of the desire for (A) to be used in procuring some of (T), (P),

* [These definitions of conceptions peculiar to the author and constituting essential elements of his system of Economics are to be found in the preface to his work (pp. XII-XVI). I have translated by *capitals* the word *capitaux* (which includes all things material or immaterial that are used more than once) and by *services* the word *services* (the successive uses of the capitals).—TRANSLATOR.]

(K), . . . (B), (C), (D) . . . This is done by dividing the abscissas and multiplying the ordinates by market prices. The curve of the utility or desire of (A) and the transformed curves of utility, or desire of (T), (P), (K) . . . (B), (C), (D) . . . being placed one under the other, we may advance a vertical line of the length $\Omega_a = q_i p_i + q_p p_p + q_k p_k + \dots$ from right to left, until it distributes itself among all the curves into ordinates corresponding to a like abscissa r_a . By carrying back the abscissas $p_i r_a$, $p_p r_a$, $p_k r_a \dots r_a$, $\pi_b r_a$, $\pi_c r_a$, $\pi_d r_a \dots$ to the primitive curves, we obtain the ordinates representing the quantities of labor (T), (P), (K) . . . and of products (A), (B), (C), (D) . . . to be consumed. It is evident that *in the state of maximum satisfaction, the raretés will be proportional to the prices according to the equations :*

$$\frac{r_i}{p_i} = \frac{r_p}{p_p} = \frac{r_k}{p_k} = \dots = \frac{r_a}{1} = \frac{r_b}{\pi_b} = \frac{r_c}{\pi_c} = \frac{r_d}{\pi_d} = \dots$$

Our prices $p_i, p_p, p_k, \dots \pi_b, \pi_c, \pi_d \dots$ for services and products are supposed to be taken at random. We will now suppose, that there have been manufactured, say, the quantities $\Omega_a, \Omega_b, \Omega_c, \Omega_d \dots$ of (A), (B), (C), (D) . . ., at random, and, leaving $p_i, p_p, p_k \dots$ as they are, let us determine the prices of (B), (C), (D) . . . by the condition that the demand for the products shall be equal to their supply, that is to the quantity manufactured. The solution of the second problem is likewise furnished us by the theory of exchange. Suppose, then, Δ_b , represented by the ordinate $\pi_b \Delta_b$ (Fig. 3), to be the total demand for (B) at the prices just supposed for services and products. We know, by the theory of exchange, that if, disregarding at first the prices of (C), (D) . . . and seeking to determine provisionally the price of (B), we cause the price to vary from zero to infinity, the demand for (B) will diminish always according to the curve $B_d B_p$. Hence, there exists a price, π'_b , corresponding to the equality of the demand for (B), with the supply Ω_b , which is $> \pi_b$, if, at the price π_b , the demand for (B) is greater than the supply, and which is $< \pi_b$, if, at the price

π'_b , the supply of (B) is greater than the demand. We shall likewise find a price π'_c , corresponding to the equality of the demand for (C), with the supply Ω_c , a price π'_d , corresponding to the equality of the demand for (D), with the supply Ω_d , and so on. After the first experiment we proceed to a second, to a third still, and so on, until we have obtained a series of prices, $\pi''_b, \pi''_c, \pi''_d \dots$ at which the demands for (B), (C), (D) ... will be equal to the supplies $\Omega_b, \Omega_c, \Omega_d \dots$. We conclude then that in the matter of production, as in the matter of exchange, *we reach the equilibrium of market of products in raising the price of those, the demand for which is greater than the supply and lowering the price of those, the supply of which is greater than the demand.*

$\pi''_b, \pi''_c, \pi''_d \dots$ are thus the *selling prices* of the quantities, $\Omega_b, \Omega_c, \Omega_d \dots$ of (B), (C), (D) ... But from the prices, $p_b, p_c, p_d \dots$ of the services, (T), (P), (K) ... result certain cost prices, $p_b, p_c, p_d \dots$ of the products, (B), (C), (D) ...* And the difference, positive or negative, between the *selling price* and the *cost price*, in the production of (B), (C), (D) ... results in the gain or loss, $\Omega_b(\pi''_b - p_b), \Omega_c(\pi''_c - p_c), \Omega_d(\pi''_d - p_d) \dots$. It is now necessary to determine the manufactured quantities of (B), (C), (D) ... by the condition that the *selling price* and *cost price* be equal, so that there may be neither gain nor

* It is true that, in order to suppose a cost price, common to all the undertakers, it is necessary to suppose that the *fixed expenses* distribute themselves among an equal quantity of products, in order to allow us to make them correspond to the *proportional expenses*; that is, it is necessary to suppose all the parties manufacturing equal quantities of products. The hypothesis is no more real than that of the absence of gain or loss, but it is as rational. If, in short, at a given point, a certain quantity of manufactured products corresponds to the absence of gain and loss, the parties in the transaction, who manufactured less, take the losses, restrain their production and finish by liquidating; those who manufactured more take the gains, develop their production and attract to themselves the business of the others; thus, owing to the distinct nature of proportional expense and fixed expense, production in free competition, after being engaged in a great number of small enterprises, tends to distribute itself among a number less great of medium enterprises, then among a small number of great enterprises, to end finally, first in a *monopoly at cost price*, then in a *monopoly at the price of maximum gain*. This statement is corroborated by the facts. But during the whole period of competition and even during the period of monopoly at cost price, it is always permissible, in order to simplify the theory, to suppose the undertakers manufacturing equal quantities of products and to make the fixed expense correspond to the proportional expense.

loss to the undertakers. This third problem is the especial problem of the theory of production, and may also be solved geometrically as follows:

Let Op_b (Fig. 4) be an abscissa representing the *cost price*, p_b . Let $O\pi''_b$ be an abscissa representing the *selling price*, π''_b , and $\pi''_b B'$ an ordinate representing the quantity Ω_b of (B), manufactured at random, and demanded at the price π''_b . If we suppose $p_b, p_c, p_d, \dots, \pi''_b, \pi''_c, \pi''_d, \dots$ determined and constant, and that we may vary the price of (B), from zero to infinity, it is certain that the demand for (B) will diminish, always following a curve $B_d' B_p'$. Consequently, there exists a demand Ω'_b , corresponding to a *selling price*, equal to the *cost price* p_b , which is $\geq \Omega_b$, according as π''_b is $\geq p_b$. We might also find a demand Ω'_c , corresponding to a *selling price* equal to a *cost price* p_c ; a demand Ω'_d , corresponding to a *selling price* equal to a *cost price* p_d , and so on. If, then, we substitute the manufactured quantities, $\Omega'_b, \Omega'_c, \Omega'_d, \dots$ for the manufactured quantities, $\Omega_b, \Omega_c, \Omega_d, \dots$ and sell them, according to the mechanism of rise and fall of prices described in the preceding paragraphs, we obtain new selling prices which will still be slightly different from p_b, p_c, p_d, \dots . Proceeding thence to a second, to a third trial, of the two experiments, and so on, we shall obtain at last certain quantities, D_b, D_c, D_d, \dots of (B), (C), (D) . . . disposed of at *selling prices* equal to the *cost prices*, p_b, p_c, p_d, \dots . We may, then, enunciate this important proposition for the theory of production, viz: *we arrive at the equality of the selling price of products and their cost price in productive services by augmenting the quantity of products, of which the selling price exceeds the cost price, and by diminishing the quantity of those whose cost price exceeds their selling price*; by which we see that, strictly speaking, the consideration of the expense of production determines not the *price* but the *quantity* of the products.*

* Imagine that instead of saving only himself, Robinson Crusoe had been accompanied by a hundred sailors and passengers who brought with them rice, rum, etc. If all these individuals held a market on the shore in order to exchange their

Our prices of services $p_t, p_p, p_k \dots$ have always been determined at random. There remains to us a fourth and last problem to solve, which is to determine the way in which the quantities demanded and the quantities supplied are equal. Now, at the point where we are, there are quantities supplied of (T), (P), (K) . . . $U_t, U_p, U_k \dots$ which are determined by the condition of maximum satisfaction, conformably to the solution of our first problem. And, in view of the quantities supplied, there are quantities demanded which are composed of two elements: first, the quantities demanded by the consumers in the way of consumable services $u_t, u_p, u_k \dots$ which are also determined by the condition of maximum satisfaction; then, the quantities demanded by the undertakers in the way of productive services, D_t, D_p, D_k, \dots which are determined by the quantities manufactured of the products (A), (B), (C), (D) . . . the demand for which is equal to the supply, and the selling price equal to the cost price, conformably with the solution of our second and third problems. We may demonstrate exactly as in the theory of exchange, that if, everything else remaining equal, we cause p_t to vary from zero to infinity, (1), the demand for (T), $D_t + u_t$, will diminish, always following a curve $T_d T_p$ (Fig. 5); (2), the supply of (T) will, starting from zero, increase, then diminish and return to zero, following a curve QR; and that, consequently, there exists a price p'_t at which the supply and demand of (T) are equal, which is $> p_t$ if at the price p_t , the demand for (T) is greater than the supply, and $< p_t$ if at the price p_t , the supply of (T) is greater than the demand.

commodities with each other, these would have current prices perfectly determined and entirely independent of the cost of production. This is the problem of exchange and shows how the prices depend only on the *rareté*, that is, the utility and quantity possessed of the commodities. But if, afterwards, these individuals, having found on the island the necessary productive services, proceed to manufacture the same commodities and carry their products to the market, the commodities whose selling price exceeds their cost price would multiply; those whose cost price exceeds their selling price would become rare, until the equality of selling price and cost price was established. This is the problem of production and shows how the consideration of the cost of production determines the quantity and not the price of the products.

There exists, likewise, a price p'_v , at which the supply and demand of (P) are equal, a price p'_k , at which the supply and demand of (K) are equal, and so on. After a first series of experiments with the prices, $p_v, p_v, p_k \dots$ including, of course, the experiments in the second and third problems, we would proceed to repeat them on the prices, $p'_v, p'_v, p'_k \dots$ and so on. Hence, *we arrive at the equilibrium of the market for services as in that for products, by raising the price of that for which the demand is greater than the supply, and lowering the price of that whose supply is greater than the demand.**

We must represent to ourselves all the operations as taking place simultaneously which by the requirements of the demonstration we have had to suppose occurring successively ; that is to say, in the market of products and in that of services, those who demand raise the price when the demand exceeds the supply, and those who supply lower the price when there is an excess of supply over the demand. The undertakers increase their production in case the selling price exceeds the cost price and reduce it, on the contrary, when the cost price exceeds the selling price. And here, again, thanks to the geometric representation, we shall have an exact and complete picture of the general phenomenon of the establishment of economic equilibrium under the rule of free competition. But, nevertheless, an analytical form of expression will be necessary to a strictly scientific understanding of the matter. From this point of view, then, having defined the elements of the system or the quantities that come into play, it is necessary to distinguish those which are given and those which are unknown, to express by equations the conditions of economic equilibrium, to prove that these equations are in number just equal to the unknown quantities, to show that, by the experiments, we approximate more and more nearly the solution, and to explain the particular conditions of equilibrium so far as concerns the product (A). For all these matters, of which nothing has

* The price of the raw materials would be determined as that of productive services.

been said here, I take the liberty of referring the reader to section III of my *Eléments*.

III.

THE EXCHANGE OF SAVINGS FOR NEW CAPITALS.

In order to simplify, let us suppose for the present, the equilibrium established as regards the quantities of commodities manufactured as well as the prices of commodities and of services, and let us neglect the changes which may be caused in this equilibrium by our investigation of the special equilibrium of capitalization. Let us, in the same way, neglect the cost of the redemption and insurance of the capitals.

The elements in the equilibrium of capitalization are the quantities produced of new capitals and the rate of interest whence results the prices of the capitals following the general formula $\pi = \frac{p}{i}$.

Suppose, there are produced at random, the quantities $D_k, D_{k'}, D_{k''} \dots$ of capitals of the sorts (K), (K'), (K'')... and that there is a rate of interest at random, i . At that rate each man engaged in exchange determines the excess of his income over his consumption, and the total of these individual excesses forms a total excess E, which is the quantity of cash at hand to buy new capitals or the demand of the new capitals in cash at the rate of interest, i . On the other hand, at the current prices for their use, $p_k, p_{k'}, p_{k''}$, supposed to be determined and constant, the quantities $D_k, D_{k'}, D_{k''} \dots$ of the capitals (K), (K'), (K'')... give a total income $D_k p_k + D_{k'} p_{k'} + D_{k''} p_{k''} + \dots$, and possess a total value

$$\frac{D_k p_k + D_{k'} p_{k'} + D_{k''} p_{k''} + \dots}{i}$$

which is the quantity of cash demanded in exchange for the new capitals or the supply of new capitals at the rate of interest i . If, by chance, the two quantities of cash are equal, the rate i will be the rate of the equilibrium of the interest,

savings

but generally they will be unequal and it remains to render them equal.

Now, we may assume that the excess of the income over the consumption is at first nil, at a nil rate, then it multiplies and augments at a positive and increasing rate, then diminishes and returns to zero, if the rate tends to become infinitely great; that is to say, if, with a minimum saving, one may gain a very great increase in his income. In other words, the rate of interest, being an abscissa on the axis OI (Fig. 6), the excess of income over consumption will be the ordinate of a curve, successively increasing and decreasing, ST . As to the value of the new capitals it evidently increases or decreases, according as the rate of interest decreases or increases. In other words, the rate of interest being an abscissa on the axis OI , the value of the new capital may be an ordinate of a curve continually decreasing, UV . Hence, we see immediately that *it is necessary to raise the price of the new capitals by lowering the rate of interest if the demand for new capitals in cash is greater than the supply, and to lower the price of the new capitals by raising the rate of interest, if the supply of the new capitals in cash is greater than the demand.*

At this time, there are the cost prices $P_k, P_{k'}, P_{k''} \dots$ of the new capital $(K), (K'), (K'') \dots$ besides the selling prices $\pi_k, \pi_{k'}, \pi_{k''} \dots$. The question is to reduce the selling and cost prices to the equality which generally does not exist between them. Now we may regard as established by the previous demonstrations that in augmenting or diminishing the quantity of a capital (K) , we diminish or augment the *rareté* and the price of its use, and consequently the selling price of this capital, and that is to say, that the curve of the quantity in relation to the selling price is the constantly decreasing curve $K_d K_p$ (Fig. 7). And we are equally justified in concluding that in augmenting or diminishing the quantity of the same capital (K) , we augment or diminish the *rareté* and the prices of the productive services which enter into the making of the capital and con-

sequently its cost price; that is to say, that the curve of quantity in relation to the cost price is the constantly increasing curve, XY . Hence, we see immediately and without the necessity of reproducing here the exposition of the successive approximations in regard to the quantities of capital (K) , (K') , (K'') ... that *it is necessary to augment the quantity of a new capital, whose selling price exceeds its cost price and diminish the quantity of that whose cost price exceeds its selling price.*

The equilibrium of capitalization once established, as has just been explained, we have:

$$P_k = \pi_k = \frac{\dot{P}_k}{i}, \quad P_{k1} = \pi_{k1} = \frac{\dot{P}_{k1}}{i}, \quad P_{k11} = \pi_{k11} = \frac{\dot{P}_{k11}}{i}$$

$$\text{or } \frac{\dot{P}_k}{P_k} = \frac{\dot{P}_{k1}}{P_{k1}} = \frac{\dot{P}_{k11}}{P_{k11}} = \dots;$$

that is to say, the rate of interest is the same for all capital saved.

We may demonstrate geometrically in a very simple manner, at least as far as concerns capitals in consumable services, that *this identity of rate of interest is the condition of the maximum utility of new capitals.*

There are two problems of maximum utility relating to the services or use of new capitals; that connected with the distribution by an individual of his income among his different kinds of desires, and that connected with the distribution by a society of the excess of its income over its consumption among many varieties of capital. The first is solved by means of the construction which was made in the theory of exchange, and referred to at the beginning of the theory of production, involving the proportionality of the *rareté* of a species of capital to the price paid for its use, according to the equations:

$$\frac{r_k}{\dot{P}_k} = \frac{r_{k1}}{\dot{P}_{k1}} = \frac{r_{k11}}{\dot{P}_{k11}} = \dots$$

It will be understood, without difficulty, that the second problem would be solved by a construction exactly similar

to the former. Instead of transforming the curves of the desires for the various services of capitals by dividing the abscissas, and multiplying the ordinates by the prices for their use, $\dot{p}_k, \dot{p}_{k1}, \dot{p}_{k11} \dots$ we should divide the one and multiply the other by the cost prices $P_k, P_{k1}, P_{k11} \dots$, involving the proportionality of the *raretés* to these prices, viz :

$$\frac{r_k}{P_k} = \frac{r_{k1}}{P_{k1}} = \frac{r_{k11}}{P_{k11}} = \dots$$

or, dividing the latter system by the former:

$$\frac{\dot{p}_k}{P_k} = \frac{\dot{p}_{k1}}{P_{k1}} = \frac{\dot{p}_{k11}}{P_{k11}} = \dots$$

which expresses the identity of the rates of interest of all capital.

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(Translated under the supervision of IRVING FISHER, of Yale University.)

DISCUSSION.

THE BASIS OF INTEREST.

(A Reply to Mr. Lowrey.)

Under the above caption there appeared in the *ANNALS* for March an interesting paper by Dwight M. Lowrey, Esq. The author, having apparently accepted Mr. George's economic doctrines in relation to labor and rent, points out the inconsistency between these doctrines and the same writer's theory of interest. He strives to refute and destroy this latter theory, and to establish a theory of his own, which will square with those doctrines. His purpose appears to be to redeem the main principles of Mr. George's system of economics from the socialism toward which they so strongly tend. His statements are so clear, his style so charming and vigorous, and his tone so confident that the reader is carried away by the writer's enthusiasm. On careful consideration, however, I can not but feel that in both the destructive, or critical, and the constructive, or positive parts of his effort, he has been unsuccessful.

Briefly stated, Mr. George's theory of interest is that capital may be so employed as to aid labor by bringing into co-operation with it the properties of matter, or the active forces of nature, thereby bringing to its user an increment which his unaided labor could not secure; that capital may purchase the help of the spontaneous efficiency of nature, and thereby become reproductive; and, that the lender of such capital may justly take interest in compensation for the loss of this assistance.

Having stated this theory, Mr. Lowrey points out the truth, that if part of this product is the result of natural forces, and not of its possessor's labor alone, then the laborer is enjoying more than his product, and, according to Mr. George's shibboleth that he is entitled to his product, the

whole of his product and *nothing but his product*, the public may justly confiscate that part of it which nature contributed. This, as he states, leads, in the last analysis, to pure socialism. In order to escape this conclusion he proceeds, not to examine whether this shibboleth is a final statement of the basis of private property, but to deny for nature any such spontaneous efficiency as is claimed for it; to argue that in all the various undertakings in which human labor is engaged nature contributes nothing to the result, but the whole is the product and reward of labor. "But the real answer to Mr. George," he says, "is that the whole notion of the reproductive power of capital is a delusion. There is no form of capital which will yield an increase which is not the result of labor."

This clear and confident statement appears to me to be in flat contradiction to the basis upon which all business is conducted, and to be as unsound in the abstract as it is unprofitable and delusive in the concrete. The fundamental vice in the theory is that it utterly ignores that vital point in all productive labor, *the means necessary to its employment*—materials upon which to work, tools with which to work, both adapted by nature and design to the kind of work in hand. Under the present constitution of society it is the part of capital to furnish, generally the former, and always the latter. Without this means of production little of what now results from labor would be produced. A part of the result must, therefore, be credited not to labor, but to capital; or rather, it is the joint product of both. This province of capital is denied in the passage above quoted. Notwithstanding this denial the facts seem to me almost too palpable to require argument, but a single illustration may not be out of place.

A South African miner finds a diamond in the earth. For his personal use it is a mere pebble and worthless. It is, however, sent to a skilled diamond cutter, who works upon it with the best appliances of his trade, and it emerges from the process a gem of almost priceless worth. Had it been

treated by tools and appliances less suited to the work its beauty and value would have been far less. Is this value due wholly to the labor put upon it? Mr. Lowrey, to be consistent, must answer, yes. But not so thinks the miner, who holds it at a large price, because he sees in it the means of producing the gem. A miner in the Black Hills finds a diamond of an inferior quality. He may place it in the hands of the same lapidist, but no amount of labor and skill, no character of tools and appliances will enable him to produce a gem equal to the former. This difference in product is due wholly to the difference in the means of production placed in the laborer's hands.

"It is true," Mr. Lowrey admits, "that there are in nature about us active forces in constant operation which we may direct to the production of wealth. The vital forces are of this category, but they, by no means, constitute the whole of it. These active forces which make for change are properties of matter no less surely than are the passive properties which offer resistance to change. A carpenter is able to put a finish on a board with a plane, not merely because he applies his labor to the work, but because the board in the order of nature, is so constituted that it may be polished in that way. Some boards take a better finish than others; and, if he worked all day, his plane would not make any impression upon a pail of water or a heap of sand. A lumberman throws logs into a stream and the current carries them down to the boom. He takes advantage of the properties of water, its buoyancy and its disposition to run down hill, in order to effect his purpose, which is the transportation of the logs. He puts the logs into the stream, says Mr. George, nature does the rest. Well, what of it? The cabinet maker moves his plane over the face of a rough walnut board, nature does the rest. Human labor gives the original impulse in both instances, and the product is the joint result of the human impulse and the properties of matter."

This is true, but it is in direct contradiction of Mr. Lowrey's purpose, for it recognizes a joint product, the re-

sult of human labor and of the properties of matter, ownership in the whole of which, in accordance with the before-mentioned shibboleth, which Mr. Lowrey accepts as having the force of self-evident truth, the laborer cannot claim, since a joint product is the result of something more than his labor. Farther on, however, it will be seen that he loses sight of this distinction and claims for labor the entire product. In the following passage the efficiency of nature, admitted above, is denied and the entire result attributed to labor.

"Mr. George's imagination is profoundly impressed by the thought that after having thrown his logs into the stream the lumberman may sleep while his timber is floating down to its destination; that the farmer may sleep while his grain is germinating and developing; that the shepherd may sleep while his flocks are multiplying. But the interpretation of this fact, so far as it is a fact, is exactly the converse of the one suggested by Mr. George. The explanation is not that in these instances the laborer receives some exceptional reinforcement from the so-called vital forces of nature, but rather that after he has done all that he can do he is compelled to wait a considerable time before he can enjoy the the finished product. Indeed, this circumstance appears to be rather a disadvantage than an advantage. * * * It is not, as Mr. George supposes, a pension to idleness, but it is directly a burden upon labor, not an aid but a discouragement. The length of time required for grain to germinate and ripen, for wine to mature, or for the logs to reach the boom, strikes Mr. George's imagination and causes him to think that nature is coöperating with man in those instances in a manner distinct from that in which she lends her aid in the transaction of planing a plank. In truth this is not the case, the only real difference is that her response to the impulse of labor is slower in one case than the other."

In view of what I have said above, it seems hardly necessary to point out the fact that in the transaction of planing the plank Mr. Lowrey has not selected an example in which

the result is the product of labor alone. To show a parity between two products, both of which are the combined result of human labor and the properties of matter, does not help his cause. He must show such a parity between the result of labor alone and that of labor assisted by nature. This he does not attempt. Then too, the proposition which he does make seems to me utterly untenable. The power to imitate the example of the Saviour at Cana would no doubt be desirable, but, in the absence of such a power, it is not probable that any one else ever saw, in the fine chemical process by which grape juice is converted into wine, or in the action of the sun, by which the acid of the unripe fruit is converted into the delicious flavor of the peach, a burden and penalty upon labor. When the plank is planed its substance is the same as before. Its value is enhanced only by the labor and skill put upon it in order to adapt it to the required purpose. But the grape juice has been transmuted and become an entirely different substance. Its value has been increased both by the care of man and by the properties conferred upon it by the process of fermentation and of ripening. Nature could not have dispensed with man's part in the transaction. No part or skill of man can do nature's part of the work. To deny to nature a share in the result, even though time is consumed in the process, seems to me sheer nonsense. But unless Mr. Lowrey intends to do so, he has not yet escaped a joint product together with the right of confiscation which "leads to pure socialism."

Space will not permit me to examine Mr. Lowrey's able paper passage by passage, but from what has been quoted above and the following, the spirit of his argument may be fairly caught :

"Now it is perfectly true that the milk and fruit do represent something more than the reward of labor of the current season, but that is the case only because the labor of the current season does not constitute all the labor which was required to bring about the result. When the tree was planted the object was to obtain fruit, and when the cow was bred the

object was to obtain milk. The fruit and the milk are the reward of all the labor necessary to obtain them, *and they are the reward of nothing else*. If the fruit tree never bears but one apple and then becomes barren, if the cow gives but one quart of milk and then never gives any more, the labor previously expended would be rewarded though insufficiently. If, on the other hand, the branches of the tree are laden with fruit and the cow's udder is heavy with milk with each recurring season through the long series of years the labor will be richly rewarded. *But in each case it is the labor alone which was rewarded*. In the same way, a table is the reward of all the multifarious labor which precedes its completion, but in that case the reward is obtained all at once. Milk and fruit, however, are recurrent rewards which nature pays in installments. *That is the only difference.*"

The italics are mine. Now I cannot doubt that Mr. Lowrey has persuaded himself of the truth of the position here taken, but I am quite confident that if the tree and the cow were gifted with reason as well as endowed with life, he would have a hard time in persuading them of the justice of his conclusion, and that their activity counted for nothing in the result. Besides it is not true that the table is the reward of all the labor which preceded its completion. It is something more than this. It is the combined result of this labor and of the forces of nature, which operated aforetime in the forest and the mine, producing the materials of which it is made. These materials, together with the workmen's tools, were the capital used in its construction; it is, therefore, the joint product of capital and labor, or, if we go farther back, of nature and labor. But under the Georgian theory the public may confiscate that part which belongs to nature. We have not, then, been helped by Mr. Lowrey's argument, in the direction in which he would lead us. In the remaining parts of the sixteen pages devoted to the criticism of Mr. George's theory of interest, I do not find anything differing in purpose or more helpful in matter, than in the passages quoted. His earnestness, his vigorous spirit, and his

clear and graceful style, are worthy of all praise, but his logic does not appear to me satisfactory, nor his conclusions sound.

In the second or constructive part of his essay, Mr. Lowrey avails himself of Bastiat's illustration as corrected by Mr. George. As he states the problem, James and William are equal in all respects, save that the latter has a plane while the former has none. Each is required to work ten days to make a plane. Each can plane one plank a day and in 290 days his plane will be worn out. James borrows William's plane, agreeing, at the end of the year, to return a new one in its stead, and to pay one plank for its use. He works 290 days and produces 290 planks. The remaining ten days he employs in making a new plane which he gives to William to replace the borrowed one, together with one plank as interest. William employs the first ten days in making a plane, the next 290 in planing with it. At the end of the year he has worn out his plane, has produced 290 planks, receives a new plane from James and one plank besides, so that James will have 289 planks and William 291, whereas, had James, instead of borrowing, employed the first ten days in making a plane he would have finished his 290 planks at the end of the year, while William would have finished planing ten days earlier and employed the last ten days in making his own new plane. At the end of the year each would have had 290 planks and would have in all other respects exactly similar to their condition on the supposition that James borrows William's plane. Under these circumstances how can James justify borrowing, or William the receipt of interest? Mr. Lowrey's assumption is that they are upon terms of perfect equality, save that William possesses the plane. It will not do, he tells us, to suppose that James borrows to enable him to meet present needs by present product, for, upon that theory William's need would be equally great, and, therefore, he could not loan the plane. Thus, point by point, he rules out all motives for the transaction save one. Upon this motive he rests his case, and believes that he has established an unassailable basis of in-

terest. This remaining motive is desire. James desires the possession of his planks ten daysearlier than he could otherwise have them, and, for the gratification of this desire, he is willing to part with a plank. William also has this desire, but he is willing to forego it for the sake of gaining a plank.

Such the problem, such Mr. Lowrey's solution of it. Upon examination, however, one will find the question still unsolved. Upon the basis of exact equality, which is the condition assumed, the desire of James would be no stronger than that of William. These desires exactly balancing each other, the transaction could not take place, except upon condition that James weakly yields to self-indulgent folly by playing more than the gratification of his desire is worth, and William overreaches his fellow by taking more than the equivalent of his self-sacrifice. Upon this assumption alone can the transaction take place. It is plain such a transaction lacks an equitable basis, and so, for want of foundation, falls the superstructure which Mr. Lowrey has erected with so much diligence and care.

Is it possible, then, to so state the case as to justify the taking of interest for capital loaned? One may easily imagine many circumstances in which the benefit to William would be greater than that of the future possession of the plank, as, for instance, the supply of present needs for self or family, or the procurement of present means of profitable employment, and, in such cases, he may prudently borrow.

But can William be justified in taking interest? If his mind has been mystified by the speculations of the political economists, he may have difficulty in so doing. But if he be a plain man of business, he would probably reason thus: "I can exchange the plane with John for a pair of chickens. These will yield enough in eggs and young chickens to repay the cost and labor I will be required to expend upon them, and have, at the end of the year, surplus sufficient to buy a plank; therefore, if I loan the plane to James, I may justly take from him the plank I might otherwise gain."

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Philadelphia.

MISCELLANY.

CONFERENCE OF THE CENTRAL BUREAU FOR THE PROMOTION OF THE WELFARE OF THE LABORING CLASSES.

On the 25th and 26th of April the first conference of the "*Central Bureau for the encouragement of institutions which tend to increase the material well-being of the laboring classes*" took place at Berlin. This Central Bureau (*Centralstelle für Arbeiterwohlfahrtseinrichtungen*) is the result of long endeavors on the part of the men foremost in the movement of social reform in Germany to create a common centre of action, and thus correlate the efforts of those wishing to better the condition of the laborers in their employ, besides aiding employers in every way (pecuniary aid excepted) in the planning and execution of such projects. The main stress is to be laid upon the erection of workingmen's houses. Plans and advice based upon the experience of the past are placed at the disposal of all employers.

Some months ago ten different associations, whose common platform is the amelioration of the condition of the laboring classes, founded the Central Bureau, the first conference of which was called for the 25th and 26th of April; with these eleven other associations joined their efforts, as well as a number of the great industrial establishments of Germany, such as those of Krupp, Stumm and others. The Government has shown its interest in this movement by co-operating with the executive organ of the Central Bureau in the appointment of two of its members. The opening clauses of the Constitution of this body define as exactly as possible the objects of the organization:

- I. The collection, exposition, and cataloguing of descriptions and reports of institutions for the amelioration of the condition of the laboring classes.

II. To give all necessary information and to answer all questions of associated, as well as of non-associated societies, concerning such institutions.

III. To send accounts of the noteworthy endeavors in this domain of social reform to the organs of the associated societies, as well as to other reviews and journals.

The first day of the conference was devoted to the tenement-house question. Inasmuch as the time was very limited the papers which were to be read were published *in extenso* before the conference took place. These were as follows :

1. The control and care of the employer for the dwellings of his laborers, by Herr Kalle (Wiesbaden.)
2. Co-operation of the employer in the solution of the tenement-house question, by Dr. Albrecht (Lichterfelde.)
3. General principles in the erection and furnishing of workingmen's dwellings, by Dr. Nussbaum, of the Technical High School of Hanover.
4. Encouragement of the settlement of laborers in the State mines through the granting of building advances and building premiums, by Chief Councillor of Mines Taeglichbeck.
5. The workingmen's colony at the State torpedo factory at Friedrichsort, by Captain Harms.
6. The workingmen's colony at the State car workshops at Leinhausen, by Railway Director Thiele.

In view of the fact that the Congress was already in possession of the printed articles these gentlemen limited themselves to a few general remarks in which they gave a synopsis of their paper, supplementing it with some explanatory facts.

In an introduction, Mr. Kalle passes in review the many advantages which an employer derives from the comfortable housing of his laborers. He then examines the different methods through which the employer can exert an influence upon the erection of workingmen's houses. The system employed by the Prussian Mining Administration, which is a

system of non-interest bearing loans and building premiums, was first considered. We shall have occasion to speak of this system more in detail.

Then came the system employed by Messrs. Billroy & Boch, in Mettlach (Upper Silesia), which consists in building houses out of the firm's funds and then enabling the workingmen to become proprietors through the gradual payment of the cost of the same. The employee is expected to pay at least 5 per cent. of the cost of the house and lot annually, of which 3 per cent. represents the interest upon the capital invested and 2 per cent. the amortization. The house remains the property of the firm during the first ten years of such payments, after which the workingman may take the property into his own hands upon the condition of continuing the payment of the 5 per cent. until the amortization is complete. This experiment has been crowned with great success and has served as a model in many parts of Germany.

The most common system was then examined—that of building the houses by the employer from whom the laborers rent. By far the most extraordinary effort in this line has been made by the firm Friedrich Krupp. Workingmen and their families included, 73,769 persons, are dependent upon this gigantic undertaking. Of these 24,193 are tenants of houses built by the company. The majority of these houses contain six dwellings or apartments. The rents are as follows :

Dwelling, with two rooms and cellar, 90-108 marks,

Dwelling, with three rooms and cellar, 120-162 marks,

Dwelling, with four rooms and cellar, 180-200 marks,

Dwelling, with five rooms and cellar, 216-330 marks,

annually. The rent is deducted from the wages every two weeks.

Other well-known efforts in this direction were then discussed, as well as the questions of leases, of general eating houses and kitchens for the unmarried laborers.

The second paper, that of Dr. Albrecht, upon "The co-operation of the employer in the solution of the tenement-house question," limits itself mainly to that part of the question which is peculiar to great centres of population. The building associations are examined in detail, especially the English, "*Terminable Societies*" and the Philadelphia "*Building and Loan Associations*," the French "*Société immobilière des ouvriers de Paris*," and the Scandinavian "*Arbejdernes Byggeforening*." The few efforts made in Germany with such associations are then taken up especially the "Berlin Co-operative Building Society," which was founded in 1886, with twenty-eight members, as a nucleus. Each member is bound to take stock to the amount of 200 marks (fifty dollars), which can be paid off in weekly dues of forty pfennige (ten cents.) No member can be the holder of more than ten shares. Upon the money paid in, a dividend is declared if the profits are high enough to warrant this. A shareholder can become proprietor of one of the houses built by the society in one of two ways. He may, on the one hand, pay one-third of the price immediately, the remainder being placed in the form of a first mortgage, upon which he has to pay the interest. In this case he passes into immediate possession. Should he not, however, have the necessary sum, he can lease the house at the rate of 6 per cent. of the price. Of the 6 per cent. 4 per cent. is regarded as rent and 2 per cent. as amortization of the cost of the house. As soon as one-third is paid off in this manner the tenant takes possession of the house as proprietor, the remaining two-thirds of the price being covered by a first mortgage. This society has rapidly developed since 1886, so that it includes to-day 800 shareholders, who have already paid in 95,000 marks. Over sixty houses have been built in different parts of Berlin, with a total value of 730,000 marks. These houses, however, can only be rented by the very highest-paid laborers, so that the question is by no means solved. Dr. Albrecht sees the solution, however, even for the lower class of laborers, in

the co-operative principle, but maintains that the employer should come to their aid by putting his business capacity at their disposal in the administration of such co-operative societies, and by granting or procuring credit for the society until the first houses are finished. With an appeal to the State as well as to the community to do all in their power to further these efforts, the report closes.

The paper of Dr. Nussbaum upon the General Principles to be followed in the erection and furnishing of workingmen's dwellings, is technical in its nature. He examines into the circumstances which should determine the selection of building lots, the principles of proper drainage and sewerage, the choice of building material, the plan of such houses, the necessary size of an apartment, their heating, airing and cleansing. This paper limits itself almost exclusively to the tenement or "flat" system.

The paper of Chief Councillor of Mines Taeglichsbeck was one of the most interesting of those presented. He showed what the State Mining Administration had done to improve the condition of the dwellings of its laborers. The results obtained show a most admirable activity in this line. In the State mines, in Upper Silesia, the administration presents the miner with a building lot, to which is added a non-interest bearing loan, which may reach the sum of 2400 marks. He is then bound by the contract* to inhabit the house himself for a period of at least ten years. Taking all the State mines of Prussia we find that from 1865 to the close of the fiscal years 1890-91, the administration of mines, in order to encourage the permanent settlement of their laborers in the neighborhood of the mines, granted 3,471,815 marks in building premiums and 6,050,545 marks in non-interest bearing loans.

A paper by Captain Harms contained an account of the efforts of the State Torpedo Factory to care for the material welfare of its laborers. The factory employs 825 workmen.

* The miner is, of course, no longer bound by the contract if he leaves the mine. In this case the house is repurchased by the Administration.

It encountered especially great difficulties in the solution of the dwelling problem because of the comparatively great number of unmarried laborers which it employs. The system adopted was to build houses with two and four apartments for families, to which were attached single rooms for the unmarried element.

Railway Director Thiele contributed a paper containing a description of the houses built by the Prussian Administration of Railroads for the employees in the workshops of Leinhausen, near Hanover.

In the discussion which followed, delegates from all parts of Prussia took part. Especially interesting were the remarks of Herr Gussmann, one of the directors of the Krupp works. He sketched as briefly as possible the almost unparalleled efforts of this company to win for itself a trustworthy, thrifty and honest army of laborers through a systematic amelioration of their material and mental condition. Another very interesting question touched upon was the position of the funds of the *State Insurance Association* for the aged and incapacitated. This is particularly important for Berlin, which, according to the imperial law, forms a district by itself. It seemed to be the general opinion that a liberal interpretation of the law would allow one-third of the funds to be invested in such a way as to encourage and promote arrangements for the amelioration of the condition of the laboring classes; such, for example, as the taking of mortgages upon workingmen's houses, the buying of land for the erection of such houses, etc. As a complement to these papers the Central Bureau had prepared a very complete exposition of models and plans of workingmen's houses as well as different institutions intended for the mental culture or physical recreation of the laboring classes, of which a few words will be said presently.

The second day of the conference was devoted to the question of the judicious use of Sunday and the other free hours of the laborer. The first paper upon the programme was that of Professor Böhmert, of Dresden, upon the question of

"Recreation of the Workingman Outside of the Home." His remarks, which were a commentary upon the printed article already in the hands of the members present, commenced with a reference to the new Prussian Sunday Labor Law, limiting the hours of labor. This limitation he would wish to see further extended. To him the labor question is more of an "*educational than a stomach problem.*" That the best recreation and recuperation is to be found in the bosom of the family is not to be denied, but unfortunately so many laborers lack a real home that one must endeavor to find for him recreation outside of the family. Furthermore, it should be the object of benevolent men not so much to increase the opportunities for amusements, as, above all, to ennoble those already at the disposal of the laborer. The speaker then proceeded to give an account of the results of an inquiry made by himself into this question by means of question-sheets sent to fifty-one large industrial establishments. The opinions given were widely divergent. In his conclusions Professor Böhmert lays special weight upon the independence of the laborer in his recreations, and the advisability of the employer taking part in them as much as possible. He furthermore advocates *fêtes* in which politics and religion play no part whatever. At the close of his address Professor Böhmert expresses the hope that the exposition of the plans and models of social arrangements will remain a permanent one and that an association of employers will be founded to do everything in their power to further the interests of their laborers. The second speaker of the day was Herr Hitze, deputy to the Landtag and Reichstag. He limited himself to the question of the recreation of the laborer in the family. His main argument was for the material and moral purification of family life as the highest object of every social reform. Several reforms are advocated, for which, however, the conditions *sine qua non* are, a healthful dwelling, a thrifty housewife, the proper care and education of the children.

Herr Zander treated "Recreation Outside of the Family."

One of the main objects of popular amusement he claimed to consist in a diminution of the contrasts between the different classes of society, through co-operation of the better situated. Deputy v. Schenckendorff dealt with "Popular Games;" Herr M. Eners with "Popular Amusements." Pastor Kanzow describes the efforts made by the famous Bolle Dairy in Berlin to provide for the recreation of their employees.

During the course of the proceedings of the second day the Minister of the Interior, v. Berlepsch, defined the position of the Central Bureau as it was regarded by the Government. The Prussian Ministry, said he, looks upon the Central Bureau as a purely private institution, but adds that had not private initiative called it into existence the government would undoubtedly have taken this step. In no sphere of social reform is private initiative so healthful and efficient as just here; as a State institution it would have remained nothing more than a statistical bureau. As a union of different associations, however, it can become an important factor in social reform. That two delegates of the government are members of the executive organ of the Central Bureau is explained by the fact that the State is the greatest employer in Germany.

In the evening an excursion was made by the members of the conference to Bolle's Dairy, where an entertainment, very popular in its nature, had been arranged so as to give the visitors an idea of the success which this philanthropic employer has obtained in the education and recreation of his 300 employees and their families.

Before closing our description of the conference, we wish to add a few words concerning the exposition of devices for the promotion of the welfare of the working classes which was arranged in the building where the conference took place. The greater part of the exposition was devoted to plans and models of workingmen's houses. The interesting part of this experiment is that the collection will probably form the nucleus of a permanent exposition. This is all the

more important for Prussia since the State itself is a great industrial employer. The exposition will be a means of bringing before the public the efforts made by the different administrators to ameliorate the condition of their respective laborers. In this way a very healthful influence can be exerted upon the industrial world, especially upon German employers. Of very great interest are the exhibits of the Navy Department, the Department of Public Works, and the Department of War. Models of dwellings, of amusement halls, of gardens, etc., show how much has been done by the Prussian State for laborers under its immediate charge. The plans and models exhibited by Krupp of Essen, also deserve special mention.

The Central Bureau for the Promotion of Institutions for the Welfare of the Working Classes has commenced the publication of a "*Correspondence*" which appears the 15th of each month as the organ of the Bureau. It contains descriptions of experiments and results in this field of work.

This institution is only one of the symptoms of the extraordinary activity of the State as well as of certain circles of employers in the study of the social problems and the attempts to solve some of them. If all the expectations of its founders are realized, the Central Bureau will undoubtedly become a centre around which all those earnestly interested in social work and reform will group themselves.

LEO S. ROWE.

Berlin, May, 1892.

THE ORIGIN AND GROWTH OF TAXATION IN JAPAN.*

The history of taxation in Japan can be traced as far back as two or three centuries before Christ. Like all primitive peoples, the Japanese lived in earlier ages by hunting and fishing, without regular government; but with the introduction of agriculture came the payment of a kind of tax. Nearly all the people being farmers, and believing that all of the land was a possession of the Mikado, they were accustomed to offer him yearly a certain part of their products. This voluntary contribution becoming in time customary and then compulsory was the origin of taxation in Japan.

Soon after the land tax the labor tax came into existence, under which the people were compelled to labor a certain time each year in making canals, roads and drains for agricultural purposes.

In the first part of the third century A. D., when Mikado Nintoku ascended the throne, the people were growing poor and wretched from the effects of the very heavy land and labor taxes which had been levied by the preceding Mikados. He ordered therefore that the people should be exempt from the land and the labor taxes for the period of three years; hoping by this means to place them in a prosperous condition. Ancient historians praise this act as one of the ablest of his reign.

Mikado Kotoku in 646 A. D. first laid the foundation of systematic taxation. Until this time it can hardly be said that a regular system of taxation existed. The rice fields were accurately measured, and their productiveness estimated. It was found that on the average a cho ($2\frac{1}{2}$ acres) would produce 2500 sho† of rice and accordingly 110 sho

* In spite of its brevity this sketch will suggest to the student of European institutions many significant analogies between the Feudal system as it developed in Japan and in Western Europe.—THE EDITORS.

† A measure, either dry or liquid, equal to ten "go," or 109.375 cu. in. about 1 qt. 1 pt. 3 oz. 1 dr. of imperial measure.

was fixed as the amount that should be collected as a tax. Two tans (the fifth of a cho) were assigned to each male, and two-thirds of the same to each female, and an actual enumeration was to be taken every sixth year.

Ten days' labor tax was annually imposed upon every person between the ages of sixteen and sixty. This tax might be commuted by a payment of twenty feet of linen, two feet being thought equivalent to one day's labor. Besides this, a tax of ten feet of silk, twenty feet of pongee, or forty feet of linen, according to the productivity of the soil, was paid for every cho of rice land. Moreover, a house tax was imposed in the reign of Mikado Kotoku. When the medium of exchange consisted of grain, silk or linen, a tax of twelve feet of linen for example, was paid for every house.

Soon after this period commercial communication sprang up between China and Japan and grew rapidly, bringing Chinese civilization into Japan. Chinese ideas influenced law, literature, religion, and industry, and no doubt the Japanese government adopted Chinese ideas in their system of taxation. The rice fields which belonged to private owners were divided into nine equal parts, and the product of the middle part was paid to the government as a land tax, the remainder going to the owner. This was called the Seiden system, and was borrowed from the Chinese without much modification.

It is said that in 723 A. D. ample rice fields were created by draining lands through recourse to the labor tax; and that although the rate of land tax was then fixed at five per cent. of the product, this rate was often reduced during civil wars, famines, and floods. One historian says that there is an instance in which the land tax was even suspended for ten years. However, after a few years, government officials began to oppress the people by exacting as heavy a tax as the people could bear.

At an earlier time it was customary to donate land to the church; but this custom was abolished in the eighth century

in order to increase national taxation, for church property was exempt from taxation. A custom of donating lands to colleges and universities in order to avoid taxes also existed, as such lands were of course free from taxes.

From an early time the Mikado's government was accustomed also to give uncultivated lands to court nobles, which lands were not subject to taxation. In these ways nearly all of the rich and fertile land came into the possession of feudal clans or churches, under the name of Soen. As a consequence, the Mikado's government could not obtain sufficient revenue and at last became much embarrassed thereby. To remedy these evils, in 1186 Shogun Yoritomo appointed a representative from each of the sixty-six provinces, and also selected one chief in each Soen to collect taxes and arrest conspirators and robbers. At first he supported the army by collecting an extra tax of five sho per tan, but this was too heavy a tax for his people to bear and the scheme was soon abandoned.

The Hojo family succeeded to the Shogunate government of the Yoritomo family. They modified the system of land tax to some extent and authorized the transfer and sale of all land except the government's possessions.

In the first decade of the fifteenth century, the Ashikaga family succeeded the Hojo in the Shogunate government. At the beginning of the reign a land tax of two per cent. was levied which was soon raised to five per cent. It will be remembered that Hojo and Ashikaga were *de facto* sovereigns, and that the Mikados were *de jure* sovereigns since the founding of the Shogunate government by Yoritomo.

The middle period of the Ashikaga reign witnessed bloody civil wars. The tax imposed by the government increased year by year, until, finally, it is said that it became so oppressive that farmers deserted their cultivated lands and left them to become waste territory. In addition to this tax expensive and luxurious works were undertaken and heavy loans were exacted from the wealthier merchants. This compulsory levy, it is said, was made twelve times a

year, or even eight or nine times a month in emergencies.

During this time the most wonderful proclamations of which we have ever heard were issued. By these proclamations all debtors were made free from their obligations and mortgaged lands were returned to their original owners without compensation. This was thought to be the means by which the rich and poor could be equalized.

Soon after Toiko took control of the Shogunate government, in the first decade of the sixteenth century, he sent unnecessary filibustering expeditions against Corea. He built Osaka Castle, the largest and most extensive work of its kind in Japan; but being unable to find the means to defray these heavy expenditures, he modified the system of land tax to meet his wants. He diminished the *tan* from 360 to 300 *ho*, while he exacted the same amount of tax from the new *tan* as from the old. In a word he increased the land tax by one-sixth. It is said that during his reign the land tax amounted to 60 or 70 per cent. of its product. It must have been the heaviest tax imposed on any peasantry in the world.

During the three hundred years of the peaceful era of the Tokugawa line of the Shogunate government, the taxes were generally lightened; but a feudal system was in full force and extensive feudal estates were owned by the feudal nobility, called Daimios. These Daimios were scattered throughout Japan and each was supreme within his own limits. Each could even issue an unlimited amount of paper currency and cause it to circulate within his kingdom and perform other like acts which are strictly sovereign prerogatives. Thus the time and manner of payment and the amount to be paid differed astonishingly in the different territories. Even in the immediate territories of the Shogunate the system of taxation was not uniform.

Besides the land included within the territory of each of the Daimios, there were lands belonging to the imperial family, lands held by the Shogun, lands in possession of the Hatamoto (a small feudal aristocracy forming a

distinct class created by the Tokugama Shoguns, and holding petty fiefs from them), lands in possession of the Shinto and Buddhist religious establishments and lands received by individuals from the government in return for meritorious service. The above distinctions existed in the ownership of land, and occupants might hold land therefore from a territorial noble, from the Mikado, from the Shogun government, from a Hatamoto, from a Shinto or a Buddhist establishment, or from any large proprietor who was a grantee of land from the government. It may be inferred from a consideration of this state of things that the people who occupied the lands were simply tenants; but while they were tenants in fact, they were landlords in name, each in respect to his particular piece of land.

Very extensive proprietary rights, though falling short of complete ownership, were enjoyed by different classes and were distinguished as lands in the town and lands in the country.

The holdings were again distinguished with reference to the kind of title, as :

1. Holdings occupied by the military class which were exempt from taxation and held no title deeds.
2. Town land, as it was called, which meant land held by merchants and citizens who paid taxes and held title deeds.

The country holdings comprised nearly all the land under cultivation, occupied by the large class of agriculturists who were on the same footing with merchants and citizens with regard to taxes and title deeds. There was, indeed, a numerous class of smaller agriculturists who were in no sense of the word proprietors, but who were tillers of land rented from a higher class of farmers or from the real owners.

The land occupied by the military class was held under the peculiar conditions attaching to military service then existing in Japan; and the position of these agriculturists differed in some respects from that of the tax-paying class who occupied town holdings. But the proprietary rights in each

case were much the same. Holdings descended from father to son, in accordance with the law of primogeniture, the effects of which were sensibly modified by the law of adoption peculiar to the country. In case of failure of direct heirs, the right of sub-letting, subject to the approval of the real owner, was acknowledged and fully exercised. Fixity of tenure was virtually assured. But though the tenant was practically free from disturbance in his possession, and had a tenure good as against all other people he possessed only a modified tenure as against the real owner. The latter reserved to himself the right—though it is believed to have been seldom exercised—of re-entering upon the land at will. In such cases of disturbance, the occupant received some sort of compensation, usually in the grant of other land in the vicinity, generally that of an inferior quality.

There were other restrictions. The agriculturalist could not combine the profession of merchant with that of farmer. Farmers, merchants and citizens were alike precluded from entering into any transaction in regard to land occupied by the military class, and a reciprocal prohibition between the military and industrial classes is due, no doubt, to the fact that land assigned to the military class was exempt from taxation, while land held by the other classes was not.

It is clear, therefore, that the holders of land in Japan during the Tokugawa Shogunate possessed very extensive proprietary rights in regard to their holdings, limited by the restrictions above-mentioned. But it must be remembered that under the feudal system, the occupants of land belonging to the territorial nobility were virtually at the mercy of their landlords.

In 1868, the Shogun was defeated after a short war, and the Mikado came into power. He was now the *de facto* as well as the *de jure* head of the Japanese government. The four great Daimios who were most prominent and influential in bringing about the revolution and most powerful in supporting the cause of the Mikado proved themselves fully equal to the occasion, and when the abolition of the office of

Shogun was declared, these four Daimios united in surrendering all of their territorial and feudal privileges to the Mikado. All powers, both civil and military, which the Mikado had lost since the twelfth century, returned again to his hands.

The doctrine was established that the title to all of the land embraced within the Empire of Japan was vested in the Mikado, and it was admitted that he had been illegally divested of it.

An important act, published in March, 1868, rendered liable to taxation all land held in grant from the government; and in the autumn of the same year the restrictions that have been mentioned as to business transactions between certain classes were removed. In 1871 every restriction was cleared away. Other regulations followed in rapid succession, each successively being further removed from the principles of feudalism against which they were aimed, each also being pervaded by equity and justice.

Among the most important laws promulgated at this time was one requiring the government to compensate individuals for land whenever taken from them for public purposes, and fixing the rate of compensation according to the value entered in the title deed.

By the beginning of the year 1872, the government had so legislated that the position of all holding land was clearly defined and there existed no longer any doubt as to the extent of the privileges enjoyed by those in possession of land.

In 1873, the great reform of the land-tax commenced and at the same time more than a thousand kinds of miscellaneous taxes were abolished which had been levied during the feudal period. From this time the whole people have been brought under a uniform law of taxation.

TAKEKUMA OKADA.

Tokio, Japan

PERSONAL NOTES.

AMERICA.

Haverford College.—Dr. William Draper Lewis has accepted the position of Instructor in Political Economy at Haverford College, Pa. Mr. Lewis graduated from this institution in 1888, and is now twenty-five years of age. In 1891 he received the degree of Doctor of Philosophy from the University of Pennsylvania. His thesis, recently published in book form, is entitled "Our Sheep and the Tariff."

Last year Dr. Lewis graduated from the Law Department of the University of Pennsylvania, and is now engaged, and expects to continue, in the active practice of law. He edits, with Mr. George Wharton Pepper, *The American Law Register and Review*. Dr. Lewis has just published a work entitled "The Federal Power over Commerce, and its Effect on State Action." He is also the author of the article on "Protection" in the new edition of Chambers' Encyclopædia.

Knox College.—Mr. John H. Finley, who has been elected President of Knox College, Galesburg, Illinois, as successor to Dr. Bateman, was born in Illinois in 1864. He graduated from Knox College in 1887, and entered immediately upon post-graduate studies in the Department of Political and Economic Science at Johns Hopkins University. While there Mr. Finley was associated with Professor Ely in the preparation of the work known as "Taxation in American States and Cities," which appeared in 1889. Early in 1889 Mr. Finley left the University to accept the Secretaryship of the State Charities Aid Association of New York. He is now the editor of the official organ of this association as well as of the recently established *Charities Review*. Mr.

Finley will continue for the present at least to conduct the editorial department of the Review.

The People's Institute (Milwaukee, Wis.).—The foundation for the promotion of popular education, known as the People's Institute of Milwaukee, has secured Mr. Fred W. Spiers as its director. Mr. Spiers is a graduate of the Worcester (Mass.) Polytechnic Institute (1888). After two years of post-graduate work in history and economics, at Johns Hopkins University, Mr. Spiers received an appointment to the Chair of History and Political Science in the State University of South Dakota. During the past year he has, however, been in residence at Johns Hopkins again. He recently declined, in favor of the Superintendency at Milwaukee, a proffered position as Secretary of the New York Charities Aid Association, left vacant by the resignation of Mr. John H. Finley.

Swarthmore College.—Mr. William J. Hull, a candidate for the degree of Doctor of Philosophy at Johns Hopkins University, has been elected as Associate Professor to the newly-established Chair of Political and Social Science at Swarthmore College.

Mr. Hull was born in Baltimore and received his bachelor's degree from Johns Hopkins University in 1889, and after a year of graduate study in history, political economy and jurisprudence he spent eight months in Berlin, where he continued his work in these subjects. The title of Mr. Hull's thesis, published in 1891, by the Maryland Historical society is "Maryland, Independence and the Confederation."

University of Chicago.—Dr. Edward W. Bemis, Adjunct Professor in charge of History and Economics at Vanderbilt University, has been appointed Associate Professor of Economics in the University Extension Faculty of the University of Chicago. Dr. Bemis was born at Springfield, Mass., in 1860. He graduated from Amherst College in 1880, receiv-

ing the class honors in History and Political Economy. In 1885 he took the degree of Doctor of Philosophy at Johns Hopkins University, having meanwhile spent two years in the West, part of the time as an editorial writer on the St. Paul *Pioneer Press*, later as principal of one of the Minneapolis schools.

During the winters 1887-88 and '88-89 he conducted courses in University Extension in Buffalo, St. Louis and other cities.

In 1889 Dr. Bemis took charge of the department of History and Economics at Vanderbilt, which position he has held up to the present time.

In 1886 at Springfield, Mass., and in 1887 at Buffalo, N. Y. he organized the first two branches of the American Economic Association. During the past winter he has given, in connection with Vanderbilt University, University Extension courses in Nashville and Evansville, Ind.; Louisville, Frankfort, Lexington and Bowling Green, Ky. At the University of Chicago Dr. Bemis will devote a large part of his time to University Extension work in and about Chicago, but will also lecture to graduate students in the University. He is the author of several monographs and has contributed extensively to various publications in this country. Among his writings may be mentioned:

"Municipal Ownership of Gas in the United States," *American Economic Association*, Vol. VI, Nos. 4 and 5.

"Co-operation in New England and the Middle States," Parts I, II and III of *History of Co-operation in the United States*, Johns Hopkins University Press.

"Local Government in Michigan and the Northwest," Vol. I, No. 4 *Johns Hopkins University Studies*.

"Mine Labor in the Hocking Valley," Vol. III, No. 3 *American Economic Association*.

"The Relation of Trades-Unions to Apprentices," *Quarterly Journal of Economics*, October, 1891.

"Benefit Features of American Trades-Unions," *Political Science Quarterly*, June, 1887.

"Insurance of American Workingmen." *Handwörterbuch der Staatswissenschaften*, Germany.

University of Wisconsin.—Frederick Jackson Turner, Professor of American History in the University of Wisconsin, was born November 14, 1861, at Portage, Wisconsin. He graduated from the University of Wisconsin in 1884 with the degree of A. B., and received his A. M. from the same institution in 1888. The year after his graduation he spent in newspaper correspondence. In the spring of 1885, he took charge of the history classes of Professor W. F. Allen during the absence of the latter in Europe. The succeeding year he was made Instructor in Oratory at the University of Wisconsin, and the two following years he was Instructor in Oratory and History, at the same time pursuing his historical studies under Professor Allen's general direction. The year 1888-9 he spent in the department of History and Politics at Johns Hopkins University, receiving the degree of Ph. D. from that institution in 1890, his thesis being, "The Character and Influence of the Indian Trade in Wisconsin," published in the Johns Hopkins Studies. In the fall of 1889 he became Assistant Professor of American History at the University of Wisconsin. Professor Allen died in December of that year, and in the spring of 1891, Professor Turner was made Professor of History. This title was changed to Professor of American History in the spring of 1892.

Mr. David Kinley who has accepted the position of Assistant in Economics in the University of Wisconsin was born in 1861 and graduated from Yale University in 1884. After graduation he became principal of a High School in Massachusetts, a position he retained until he determined to resume his studies in Economics at Johns Hopkins University. During the past year he has been Instructor in History and assistant in Political Economy in that institution, as well as Professor of Social Science in the Woman's College of Baltimore.

Western Reserve University.—Henry Bourne was elected Professor of History and Instructor in Philosophy in

the Cleveland College for Women at the annual meeting of the trustees of Western Reserve University in March. He was born in 1862. After his graduation from Yale, in 1883, he was for one year Principal of the Thomaston (Conn.) High School. He then entered the Yale Divinity School, where he devoted himself to special historical work under Professor George P. Fisher, continuing his studies after graduation. In 1888 he became an assistant editor of the *Congregationalist*, Boston ; but deciding upon teaching as his profession, he accepted a position in the Norwich, (Conn.) Free Academy, where he has taught History and Philosophy and organized a system of Academy Extension, designed to provide instructive and interesting lectures by the Academy teachers for the working classes in the neighboring factory villages. Professor Bourne has contributed to *The Nation*, *The New Englander* and other periodicals, and written largely for *The Congregationalist*, on the social and political question of the day.

HOLLAND.

Groningen.—The vacancy in the Chair of Political Economy in the removal of Professor Cort van den Linden to Amsterdam has been filled by the election of Dr. W. A. Reiger, who delivered his inaugural lecture in September last. Dr. Reiger took his degree of Doctor Juris Utriusque at Groningen in 1865. In that year he published a dissertation on the principles of international law relating to vessels, and in 1867 a "Commentatio de Alberico Gentili, Grotio ad condendam juris gentium disciplinam, viam præpræeunto." He has been a frequent contributor to the periodical press.

BOOK REVIEWS.

RECENT BOOKS RELATING TO THE SILVER QUESTION.

THE QUESTION OF SILVER. By LOUIS R. EHRLICH, of Colorado. Pp. 115. New York. G. P. Putnam's Sons, 1892.

MONEY, SILVER, AND FINANCE. By J. HOWARD COWPERTHWAIT. Pp. VIII. 242. New York. G. P. Putnam's Sons, 1892.

THE MONETARY QUESTION. By G. M. BOISSEVAIN. An essay which obtained the prize offered by Sir H. M. Meysey-Thompson, Bart., at the Paris Monetary Congress of 1889. Translated from the French by G. TOWNSEND WARNER. Pp. X. 152. London. Macmillan & Co., 1891.

SILVER IN EUROPE. By S. DANA HORTON. Pp. XII. 290. New York. Macmillan & Co., 1890.

The bimetallic controversy, known as the battle of the standards, still continues in the field of economic discussion. At the same time the demand for the free coinage of silver in the United States is as strong as ever in the political field. To separate the two is consequently difficult for the average reader. That they are clearly to be distinguished, however, is evident to every careful student of economic science. "Silver enthusiasts really believe," says Mr. Ehrlich, "and want sane men to believe, that the magic of free coinage is quickly going to wipe out the present difference of 27 cents [now 32] between the silver and the gold dollar." "But" Mr. Ehrlich continues—and it ought to be noted that he is from Colorado—"it is impossible. Free coinage must be followed by the immediate disappearance of gold" (p. 27). "There is on our planet, in round figures, three billion nine hundred million dollars worth of silver held as money or as a fund for money redemption. . . . Free-silver men tell us that the magical alchemy of free coinage by the United States all alone is going to raise these thirty-nine hundred

millions from 95 [now 87] cents to \$1.29 [per ounce] (p. 86).

If the demand for silver dollars is gratified, the author holds we shall have only silver dollars much as the demand for gold coin in 1834, when satisfied by legislation, gave us only gold coin and that "free coinage" is to-day synonymous with silver monometalism. In view of the radical divergence of opinion on the possible effects of the free coinage of silver, it is necessary to proceed carefully, keeping quite distinct the internal policy of the United States on the one hand and the principles which underlie an international regulation of the world's money on the other.

The world may be interested in our monetary experiments but the money of the world is not regulated by act of Congress. Congress cannot give the world a bimetallic money if the world does not want it. But does the world want it? This question is not easily answered. Just as it is difficult for the average reader to distinguish between the legal and the commercial definitions of bimetallism, so it is next to impossible to separate the decline in prices due to changed industrial conditions and methods, from the decline due to the increased value of money. It is practically impossible for the most expert statistician to separate them, and thus measure the possible advantage of bimetallism in the money of the world. Mr. David A. Wells in a series of articles published under the title "Recent Economic Changes" has attempted to defend the thesis that the fall in prices since 1873 is not due in the least to an appreciation in the value of money. He holds that the decline, such as it is, is amply accounted for by man's increased control over the productive forces of nature. He examines the history of the production of a large number of articles—wool, cotton, iron, coal, wheat, etc., and finds reasons for the lower prices of most of them in the changed conditions of production, while those whose conditions of production have not changed have not fallen in price. But his facts are questioned, his methods criticised and his conclusions doubted. Indeed a book has recently been published and is

being distributed "as a contribution to the cause of bimetallism," which defends exactly the opposite thesis. The intention of this work "is merely to show that the general range of prices has been largely controlled by the increase in, or the diminution of, the output of the money metals from the mines."*

The difficulty lies in the absence of a perfect measure. Shall the basis of comparison be wholesale or retail prices? Chicago prices, Liverpool prices, or Calcutta prices? Are "average" prices daily, weekly, monthly, or yearly averages? What are included in "the general range?" Staple articles only? Real estate? Wages? Luxuries? Freight rates? Shall we take an English, a German, or an American "index number"?

The mention of these two difficulties—the confusion in regard to "free coinage" in the United States, and that relating to the "general range" of prices—shows how unsatisfactory must be the discussion which attempts to rely on facts and figures. There is a goodly body of undeniable facts which are frequently ignored or forgotten in the discussion, but there is a practical advantage to be derived from studiously avoiding doubtful figures and speculative estimates. Writers are fully justified in considering only the economic principles involved, provided the analysis is complete, and the logic sound. But, is the analysis complete, and the logic sound which, for instance, underlies the volume-of-money theory, and the plea for legislation to increase the circulation? Mr. Cowperthwait, a business man, maintains (p. 183) that "the theory that variations in prices and in industrial activities are due often or generally to variations in the volume of money, is so persistent that the hourly, daily, weekly, and yearly denial of this theory by the movements of prices, on the floor of every commercial or stock exchange in the world, does not suffice for a complete overthrow." "During the past twenty years or so," he says, "the prices of commodities in this country have fallen to the extent of

* "The Economic Crisis." By Moreton Frewen. Pp. XVI. 194. London: Kegan Paul, Trench & Co.

an average of about 30 per cent., . . . but . . . there has been an increase in the volume of money in circulation, to the extent of about 94 per cent., being an increase *per capita* of population of about 20 per cent."—"Good proof," says the bimetallist, "that the volume of money should have been much more largely increased,—a fall of 30 per cent. in prices, in spite of a 20 per cent. *per capita* increase in circulation!" "But," adds Mr. Cowperthwait, "there have been a fall in the average rate of interest, an advance in the average rate of wages, an advance in rents, and an advance in the price of real estate." (p. 185.)

"Business may be unsatisfactory, or the reverse; the rates of interest, at financial centres, may vary between 1 per cent. a day and 1 per cent. a year; prices and wages, or either of them, may be high or low, and we can assert that, within reasonable limits, any state of affairs may exist, co-incident with a large or small amount of money." (pp. 194-95.) Which is the correct analysis? Does the logic of the situation demand free coinage of silver with full legal tender, or may a congressman be perfectly certain that a sufficient volume will be supplied under the "automatic action of the laws of trade?"

Again, is the analysis complete which says that the unit of value is a creature of law, or that the measure of value, the monetary yard-stick, is purely conventional?

Money is used to buy goods and to pay debts. The law prescribes what citizens *may* take in the first case, and what they *must* take in the second. For buying goods, now one commodity, now another, is *convenient*. A government may or may not supply as good money at any particular time, as is offered by private enterprise and individual initiative. But, for paying debts, the government exercises its power to command. *Debtors must pay, creditors must receive legal tender*, though that be a depreciated promissory note. A question of justice is thus involved,—a question which completely baffles the scales of the blindfolded goddess. The members of a community measure the value of goods in a rough-and-ready way, in terms of the most common article—

sheep and cattle ; kauri shells ; metals, coined and uncoined. As commerce develops, the unit or standard becomes fixed, as does the unit of weight, or length, etc. The practical question for business men and for legislators alike, is : How can this measure be made unchangeable ?

This raises a third point of dispute. It relates to the cost of production of the precious metals, they having come to be used as the money of the civilized world. Is the value determined by the cost of production, or is the cost of production and the margin of cultivation determined by the value, or are each determined by unconnected causes ? Monometalists, whether silver or gold monometalists, have regarded bimetalism as unscientific, absurd, impossible. Economists have held that the price of the precious metals was determined by the cost of mining that portion of the supply produced at the greatest disadvantage. That, as a consequence, whichever of two metals was undervalued in the coinage laws of any country would not be produced there for minting purposes. With changes in the cost of production of the two metals would come changes in the currency of the country and the world. But, say the bimetalists, if the mints of the world are all open to the free coinage of both metals at a given ratio, the currency of the world will at once absorb any surplus of either metal and maintain a fixed ratio by determining in part the margin of cultivation or the kind of mine which shall be worked. Moreton Frewen, in his articles written for the (India) *Pioneer* goes further, and maintains that the world's outlay in producing gold and silver is greater than the money value of the two metals produced. "It may seem at first sight incredible that humanity should in these philosophic days continue to produce gold and silver at a loss ; but the life of the gold-seeker is a life often of intense excitement ; the attraction is that of the gambling table intensified ; the blanks are indeed many, but the prizes though few are very valuable. The hundred lose all they possess, and perhaps an entire life's work, but the one becomes a millionaire." (p. 93.)

The problem is thus one for the psychologist, as well as the economist and geologist, to answer.

If it be true then that the surplus could be regularly and indefinitely absorbed, or that cost of production does not determine the value of gold and silver, a bimetallic agreement among the nations of the world to maintain a fixed ratio is perfectly practicable. The union is only a question of expediency and interest. Part of the world now use gold as the basis of currency, with some subsidiary silver; another part uses only silver as currency or a basis for currency. Is it expedient for all to agree to use either interchangeably at a fixed ratio? Will the fluctuations of the monetary unit in gold using and silver using countries alike be less frequent? If more frequent will they be less extreme and more gradual, or less so? Which kind of variation is least pernicious to industry? Is it alike for the interest of the highly developed and of the industrially backward country to have an invariable par of exchange? Are the interests of debtors and creditors at variance in this instance?

These are the questions to which Mr. Boissevain attempts to give an answer, but with only very limited success. His treatment of the subject is neither systematic nor exhaustive. It is not conclusive at any point. The author believes that the bimetallic system really rests on a scientific basis; but a chapter of twenty pages fails to reveal that basis. He thinks this bimetallic scheme "the only system by which it is possible to obtain monetary unity in the commercial world," and that "monetary unity is a condition of economic progress and development;" but he is very despondent as to the possibility of securing international agreement, though he nowhere states the hindrances to be overcome. He is convinced that this monetary system including (1) Free and gratuitous coinage and (2) A bimetallic monetary unit will ensure "the stability of the value of money so far as that can be attained;" but does not explain why and how it will do this "in the best and most certain manner." He

is fully convinced that an international agreement can only exist on the footing of the ratio of 1 to $15\frac{1}{2}$, the old legal ratio of France and of the Latin Union, or else 1 to 16, the legal ratio of America. But if 1 to $15\frac{1}{2}$ or 1 to 16, why not 1 to 15 or 1 to $16\frac{1}{2}$? This and other equally important problems in the situation are left unsolved. Mr. Boissevain may write with the conviction of an ardent bi-metalist, but it can hardly be said that he writes with judgment.

The reverse is true, as was to have been expected, of Mr. S. Dana Horton's latest contribution to the literature of bi-metalism. Scholarly in style, it is both systematic and exhaustive in the treatment of the problem. It is prepared with greatest care and displays the wise judgment of the author. His theme is the movement for the general restoration of silver to a legal equality with gold, and he presents exactly those facts and phases of the subject which the American reader most needs and is least likely to get in popular discussions of the silver question. The work is historical, and deals with the recent Paris Congress (1889) and the work of the Royal (English) Commission on Gold and Silver. It thus emphasizes the broad lines on which the solution of the monetary problem must rest.

Gold and silver are the world's money metals. If a single nation would use both it must do so subject to the conditions of the world's market. So soon as its mint ratio differs appreciably from the market rate of the two metals the undervalued metal only will be brought to the mint for coinage. The result is as inevitable as it is that water will run down hill. And it would appear that the United States has not only made a very poor investment under the law of 1890, but that it is growing increasingly worse as time goes on—that we are reaping the disadvantages without any of the advantages of free coinage of silver. Such a lucid statement of the laws of trade, the condition of foreign exchange, and the principles of business as is made by Mr. Cowperthwait in the book in question would seem to warrant

his conclusion that we should "reverse the silver policy; stop buying and commence selling."

It is said by the advocates of free silver that we have not money enough, and the argument always appeals to the individual. Who ever had money enough? A few more dollars for the same expenditure of time and energy, or as a gift, are always acceptable. But no one expects to give away silver to be coined, nor is it clear that dollars would be cheaper to those who earn their bread by the sweat of their brow. "The greatest creditor class and the one which will suffer most from free and unlimited silver coinage is the labor class—the miner, the servant, the mechanic. Every man who works for wages is a creditor in the evening, at the end of the week, or at the end of the month. He will be the last to discover how a depreciated dollar defrauds him, and that he is daily meeting a loss by its decreased purchasing power." (Ehrich p. 31.) Dollars would be cheaper under free coinage by the extent that the price of silver was less than \$1.29 per ounce, just as they would be if Congress passed an act making 20 grains of gold legal tender for one dollar, but everything else would be dearer. Prices would rise. This is decidedly in the interest of present debtors, railroad corporations included, but it is hardly in the permanent interest of debtors. "If you want to pay a debt with a liberal discount, and expect to die soon thereafter so as to escape the other disagreeable incidents of general business collapse, then you want free and unlimited silver coinage." (p. 108.)

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THE RATES QUESTION IN RECENT RAILROAD LITERATURE.

RAILWAY RATES AND GOVERNMENT CONTROL. ECONOMIC QUESTIONS SURROUNDING THESE SUBJECTS. By MARSHALL M. KIRKMAN. Pp. 354, Chicago and New York. Rand, McNally & Co., 1892.

THE RAILWAY PROBLEM, with many illustrative diagrams. By A. B. STICKNEY. Pp. VII. 249, St. Paul, Minn., D. D. Merrill Company, 1891.

THE RAILWAYS AND THE TRADERS, a sketch of the Railway Rates Question in Theory and Practice. By W. M. ACWORTH. Pp. VIII. 378, London. John Murray, 1891.

THE RAILWAYS OF ENGLAND, Fourth Edition. Pp. XVI. 427. 1890. Same author and publisher.

THE RAILWAYS OF SCOTLAND, Pp. VIII. 191, 1890. Same author and publisher.

THE WORKING AND MANAGEMENT OF AN ENGLISH RAILWAY. By GEORGE FINDLAY. Fourth Edition, Pp. VIII. 354. London. Whittaker & Co. Also George Bell & Sons, 1891.

The literary battle over the railroad problem goes bravely on. The actual strife of warring railroads is reflected in the conflicting theories of the books. Mr. Kirkman's volume, in its title, presents an important issue of the day; rather, it may be said, two issues, both of which are far from satisfactory settlement. One of these relates to the principles upon which rates are fixed; the other is whether the government or the railroad companies shall have the fixing of the rates. It may be premised that, however each nation may decide upon the latter question, the former cannot be settled until the theory of value receives a thoroughly scientific treatment. The theory of rates is so fundamentally a part of the theory of value, that the form which the latter may ultimately take will be the determining point of the former. Mr. Kirkman has been a prolific writer on railroad topics. He has evidently a wide acquaintance with railway practice and possesses an extensive and detailed knowledge of railway

affairs. He has read and studied widely the literature of the subject, at least the books in English. It is to be regretted that his evident diligence in collecting the materials and his fervor of utterance have not produced a better book. Somewhere in the process of making, the book has been spoiled. One glaring fault is in the temper of it. It contains many venomous thrusts at those who hold different views—particularly at Mr. J. F. Hudson, the author of "The Railways and the Republic." Another fault is that it contains nothing new, both facts and theories having been stated repeatedly by others. Mr. Kirkman praises the railroads with fanatic zeal. Their methods, their practices, their aims, their achievements are all righteous and beneficent. He will hear no criticism adverse to them. He even regards as sentiment, entailing too much cost, the safeguards of English law as to protection to life at crossings, stations, etc. Governments that fix rates, while they "pose as public benefactors, ought to be branded as asses" (p. 89). His style is terse and nervous—often to excess. His epigrams are sometimes hysterical, and he has "damnable iteration." Especially is this true of certain hackneyed phrases and ideas. For instance, "The commerce of the world adjusts itself according to natural laws" (p. 9). "Trade must be allowed to work out its destiny" (p. 9). "Railroads are governed by what we may term God's natural laws—the laws of trade, universal, adaptable, just" (p. 10). "The business of railways governs itself. It adjusts itself on equitable grounds of the greatest good to the greatest number" (p. 89). These are but random examples.

Discriminations in favor of localities and of individuals are justified. "The action" he claims, "of the railways in connection with the Standard Oil Company was *involuntary*, unavoidable and natural" (p. 21). It was an instance undoubtedly of the action of "God's natural laws." In his advocacy of the railroads and all their works he forgets his devotion to the principle of free competition and justifies pools. On page 109 occurs a beautiful, if somewhat im-

pressionist sketch, of a peaceful, idyllic railroad "pool." And railroad wars "have served to illuminate and clear the sky. While temporarily disturbing values, the harm they have done has been partially offset by the benefits that have flowed from them. They are the outgrowth of a too exuberant life, a superabundant vitality; a plethora of energy, interest and ambition" (p. 131).

In defence of Mr. Kirkman let it be said that his intemperate praise of the railroads is only a natural reaction against the intemperateness of some writers on the other side. It is unfortunate that he has not been able to absorb something of the calm and sober spirit of Professor Hadley and of Mr. Dabney, both of whom he quotes. But his book is neither judicial, like that of Mr. Dabney, nor scientific like that of Professor Hadley.

The first half of Mr. Kirkman's book discusses the basis of railway rates, while the second half treats more especially of the relation of government control to rates. There is also a chapter devoted largely to the Interstate Commerce Law, and another in which a brief résumé is given of the status of railways in various countries. The latter part of the book is more sober and dignified in tone. However, a fatal unscientific mingling of topics runs through all the chapters. His teaching is, in a word, the old doctrine of unqualified *laissez-faire*—as an economic theory, at least fifty years behind the times. It is curious how men still argue that man in running a railroad, if left alone, will act strictly according to natural law; but that man in running a government is somehow freed from the operation of that natural law, and can work out all the viciousness that is in him. Why the action of the Interstate Commerce Commission is not as strictly "involuntary, unavoidable and natural," as the action of the railways in contracting with the Standard Oil Company, Mr. Kirkman fails to explain.

But the book is not absolutely wanting in scientific value. The scientific facts, however, are not given proper emphasis. They are smothered with rhetoric. He sees clearly that

the principle of charging what the traffic will bear is the tendency of railroad practice wherever the railroads are left free, and he really argues well at times in support of the justice of such a rule. He shows how a railroad often must make discriminations in order to meet its rivals at competitive points, and yet earn enough to pay its operating expenses and meet its fixed charges. He shows the benefits of pooling arrangements, and advocates legalizing them. He admits that there can be too much railroad construction and is even willing that there should be some form of mild government supervision. But all that is valuable in this book is to be found in far better form elsewhere. It helps his cause, however, in this, that one lays down the volume with a kindlier feeling toward the railroads—the feeling that to have their cause thus championed is punishment enough for their misdeeds.

Mr. Stickney is a practical railroad man, of wide and varied experience. "His experience," he tells us, "has been in the legal, the construction, the operating and the financial departments." He has a plain, direct style, and a modest tone which makes his book pleasant reading. One is impressed likewise with his earnest attempt to be strictly fair in his treatment of all sides. The topical arrangement of his material is without apparent plan. There is a *mélange* of historical information, practical business detail, and discussion of principles. In his discussions he does not always keep distinct the legal and the economic elements. The fundamental question of his whole book is the rates question. Although a railroad manager he does not believe in many of the usual railroad methods. Of discrimination he says, "This discrimination in the matter of rates between different localities and individuals is the point of greatest friction. While it is confessedly building up certain localities and making certain rich men richer, it is slowly and surely sapping the foundations of the prosperity of both the great masses of the people and the railway companies." (p. 6). He calls the low rates at important junctions "discrimina-

tion," not "competition." He believes that such arbitrary power as the fixing of rates, with its attendant results upon trade, should not be left in the hands of private individuals. It is a public function, he contends, and safer in the hands of the government. He has some interesting discussions as to the similarity between railway rates and taxes, but it cannot be said that he adds anything valuable to the theory of rates. The book is one to be commended. It is thoughtful, earnest, with much useful information in it, and especially interesting as showing that all who are interested in railroads do not regard railroad practices as immaculate, nor claim an inalienable right to exemption from government control.

With Mr. Acworth's three books we come again to an essentially one-sided author. In his work on the Railways and the Traders he confesses that he writes from the point of view of the railway interest. These three books together are a justification and glorification of the railways of Great Britain and of the English railway system. The book on the Railways of Scotland is virtually a supplement to the larger work on the Railways of England, and is written in the same vein. The work on the English railways describes in succession the chief railways of England. The author confesses that he has recently been converted from hostility toward the railways to ardent admiration. He consciously describes only their excellencies. He claims that in some of the great systems can be found excellencies surpassing the best that can be found in other countries. His attitude puts one on guard, but his style and method are seductive. The volume on the Railways and the Traders is specially devoted to the rates question. He believes that "the private railway companies of England and the United States have served the public better than the Government railways of the Continent or of our Australian Colonies, and—which is still more to the point—are likely to serve it better in the future."

He argues elsewhere that State interference is certain to

lead to permanent high rates. He can find no good substitute for the present "English system of freedom to private managers to vary their rates within the limit of their statutory maxima, and subject to appeal to a court of law" (p. 113). As to the principle upon which rates shall be fixed he comes to the conclusion that cost of service cannot be ascertained, and if ascertained would not be a guide, that equal mileage is not a logical or just or workable basis for rates, and that "there is nothing to fall back upon but the principle of charging what the traffic will bear" (p. 48). His arguments are more practical than theoretical. English rates are not extortionate, because it cannot be proved either that the railways as monopolists exact more than the normal rate of return on their capital, or that they charge more than is charged elsewhere for the same service. He supports this principle of charging what the traffic will bear by analogies with other transactions, tolls, taxation, professional charges and the like. Mr. Acworth has studied American conditions and gives an interesting chapter on American rates. The reader will be entertained throughout the entire book. The style is lively. There is abundant information, some of it of a chatty character—all of it interesting. But one cannot leave the book feeling satisfied that the rates question has been settled.

Mr. Findlay is by profession a civil engineer and holds the position of General Manager of the London and North-Western Railway. His book is taken up with the consideration of such topics as Rolling Stock, Working of the Trains, Railways as a Means of Defence, etc. The rates question is only incidental to the main subject of the book, and is treated only in a brief descriptive way. His statement of the principle of English rates is interesting. "The rates are governed by the nature and extent of the traffic, the pressure of competition, either by water, by a rival railway route, or by other land carriage; but, above all, the companies have regard to the commercial value of the commodity and the rate it will bear, so as to admit of its being produced

and sold in a competing market with a fair margin of profit." (p. 206). This is an excellent statement of the principle of charging what the traffic will bear. With regard to the relation of the State to railways in England he writes briefly, taking the customary attitude of a railroad official—injured innocence—in presence of any feeling of hostility to railroads. He analyzes the present laws after the methods of a manual, and outlines a plan upon which State purchase would probably have to be carried out, if it should be decided on. The book has no direct economic value. In fact it may be said that so far as the economic aspects of the railway problem are concerned none of these books bring any substantial aid.

What is needed now is a scientific discussion of the question in all its aspects. These books are mainly advocates of special interests. In the most of the discussions on the rates question it is assumed that (to quote Mr. Kirkman) "the commercial interests of a people are indissoluble," that there is such a harmony of interest between different classes of society that if a given policy be proven good for one class it will be good for all. The traders argue that rates favorable to them must be good for the railroads and good for everybody. The railroads assume that rates good for them are good for the traders. The problem is much wider than this. Rates must also be considered from the standpoint of the consumers and of society as a whole. A schedule of rates must be tested from all these points of view before it can be accepted as wise and right. If any one class of interests could be a satisfactory test, it would be those of the consumer rather than of the producer or the transporter. Consumption is fundamental—at once the starting point and the end of economic life. But the test is not complete until the interests of society, as a whole, are kept in view. When thus tested it appears that rates are not justifiable which are not adjusted with reference to developing the productive strength of the people. Society cannot ignore its future development. A society is not prosperous which has no guarantee of future progress in its present

welfare, however splendid and perfect the present may appear. It is here that the doctrine of the harmony of individual interests fails. The principle of free competition logically followed, lays on the competitors no positive duty toward the community. The negative precept, "so use your own as not to injure another's" is the extent of the obligation. Society can expect from unregulated railroads only the pursuit of their own interests. The interest of the railroad is the largest net revenue. To obtain this the railroad undertakes to build up certain localities and industries, thus shaping the future growth of society to the present needs of the railroad. It has been pretty generally decided that protection to infant industries is not a legitimate function of private railroad enterprise. There is one radical difference between the social point of view and every other. Society is immortal, but no other interest is, even corporations die. They are managed in the interest of those who at present constitute them. No railroad corporation would of its own free will adopt a policy involving hard struggle and great risk of failure for fifty years in the hope of realizing at that time a large and permanent good. Benefits maturing only after many years are not the objects of railway enterprise. With society it is otherwise. The continued existence of a corporation is merely legal; but the immortality of society is actual and essential. Society has a duty toward the future which it cannot ignore and cannot delegate. If individuals or corporations follow practices which tend to destroy the potentiality of future growth in the interest of mere immediate good, society as a whole must interfere and resume direction. The neglect of this principle has wasted our forests, prematurely exhausted our land, built countless unnecessary railroads, prevented the growth of new industries, covered our western prairies with bankrupt farmers and built up gigantic private interests which threaten our political stability. A policy which was fitted only to early conditions has been pursued when social growth has rendered such a policy ruinous. In a new country the easiest

way for society to get a much needed improvement, such as a railroad, may be by appealing to the speculative spirit in individuals in a grant of privilege to build the railroad, with the utmost freedom of regulation. But, allowing that such is the best policy for a relatively crude society, the moment that such a grant becomes harmful to society, the grant must be recalled. There is nothing inalienable in a grant to a railway corporation of the right to fix rates. It is a permissive right only. It is claimed by Mr. Kirkman and others that a railway must fix its rates so as to build up business, to develop undeveloped industries and localities. They virtually assume that society has irrevocably delegated to irresponsible private parties the right to determine what industries shall be built up, what particular individuals shall be driven out of business, what localities shall be developed and what ones stunted and ruined. And since the fixing of rates does actually involve such results, it has simply become imperative that society shall resume its sovereignty and regulate rates. The railways affect far more vitally and generally than do other industries, the *future* of society. When built they are permanent. They must be used. The country will be developed along their lines. Their management and rates affect the development of society, not for a few years, but for centuries. Further, they have become the central industry. Their policy dictates in the main the policy of all other industries. It is this which makes the control of railway rates so manifestly a social function. It is the lack of necessary harmony between the *present* interest of individuals and the *permanent* welfare of society which breaks down the principle of unrestrained competition as a general rule.

As to the economic principles upon which rates should be fixed, only certain general rules can be laid down.

1. The benefit of any one industrial class is not a sufficient test. Rates to be justifiable must harmonize, as far as possible, the interests of producers, traders and consumers, as well as railroad interests.

2. Rates must be fixed so as to secure the productive growth of society. Future good must not be sacrificed to present good.

3. The highest price which the consumer will pay for an article constitutes the whole fund which can be distributed between railroad, trader and producer. From this fund railroads are built. From this standpoint the value of railroads and their services are determined.

4. Competition, by bringing into the field more producers, traders and railroads to be maintained, may force the cost to consumers up to this maximum price limit.

5. The permanent line of minimum cost to consumers is fixed by the lowest cost of production, including lowest rate of profit which will tempt new competition.

6. The consumers' interest requires the lowest rates consistent with continued efficiency of the road and continued low cost of production. It is to the consumers' interest that both railroad and producer have a fair profit in order that quality of goods and service may be maintained; but that profits should not be so high as to attract too many competitors.

7. The value of all commodities being determined by their marginal utility to consumers, rates according to what the traffic will bear are the only logical rates under free competition. If transported goods are to compete with goods produced in the consumers' locality, their cost to the consumer can be levelled in the market only upon the principle of charging for transportation what the traffic will bear.

8 and 9. If the present welfare of society alone were considered there could be no objection to this principle. From the standpoint of the future growth of society, however, this principle must be modified, while still remaining the basis of the system.

These are only a few of the conclusions suggested by this analysis of the interests involved in the rate question.

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LE REFERENDUM EN SUISSE par SIMON DEFLOIGE, Avocat, précédé d'une LETTRE SUR LE REFERENDUM EN BELGIQUE par J. VAN DEN HEUVEL, Professeur à l'Université de Louvain, Pp. xxxiv. 190. Bruxelles, Société belge de Librairie. 1892.

The problem, to what extent ought the people to participate directly in legislation has always been one of the most interesting in all the range of political speculation. This question is gaining, moreover, a greater and greater practical significance, especially in Belgium, where, after much discussion, definite action is reported to have been taken looking towards the introduction of the Referendum in that country. The book in hand is therefore particularly timely. Without bias or prejudice, he claims, and after a careful personal investigation of the working of the system in Switzerland and consultation with a number of distinguished Swiss publicists, the author gives us the most complete and satisfactory account of the Referendum which has yet appeared. As an introduction Professor J. van den Heuvel, of the University of Louvain, contributes an admirable "Letter on the Referendum in Belgium." Professor van den Heuvel, while an unqualified opponent of the innovation, still allows us to see between his manifold and convincing arguments against the introduction of the Referendum some of the reasons advanced in justification of the change. The plan proposed involves an amendment to the Constitution by which the King may, upon occasion, consult the people directly. This Royal Referendum, it is claimed by its advocates, will strengthen the position of the King and at the same time lighten his responsibility in the exercise of his right to approve or reject bills presented to him. Although the Constitution vests in the monarch the right to veto bills, choose and dismiss his ministers and dissolve the Parliament, he can practically exercise these rights only on rare occasions, owing to the great responsibility involved. The Referendum or direct consultation of the body of voting citizens would show the King the real sentiment of the nation and so permit him to act with confidence. A natural response to such

an argument is that real power is inseparable from responsibility. The weight of responsibility cannot be lightened without to that extent diminishing the scope for self-determination in the ruler. Doubtless if the theory which makes the King simply an exponent of the opinion of half of the voters plus one, were to be accepted in a monarchical government it would furnish a broad basis for the suggested innovation. In fact the introduction of the Referendum in Belgium could hardly fail to alter in this respect the underlying principles of the Constitution. His own personal judgment on the expediency of a measure (in the formation of which the attitude of the country at large could not but enter as an important factor) would no longer determine the King's conduct. It is hardly conceivable that this result could be obviated. If it were left to the King to decide when to resort to the Referendum, the principle of direct popular interference being recognized, he would be subject to petition and insurrection. If, on the other hand, any other authority were intrusted with the power to demand the Referendum the King would lose his power of veto. Professor van den Heuvel, after pointing out the profound differences between the republican and federal Constitution of Switzerland, conferring only limited powers on the central government, and the monarchical, unitary system of Belgium, with its "Cabinet government," depending upon parliamentary majorities, clearly shows how great a change the introduction of the Referendum would cause in the latter country. It would, he claims, not only destroy the prestige of the King but would demoralize the Parliament and the ministers, and undermine the wholesome influence of party organization. "Even the Swiss," he justly observes, "who in respect to their practical sagacity may be placed in the first rank among the nations of Western Europe, have resorted to the Referendum only in a hesitating and reluctant fashion." And yet the Swiss Federation, both by nature and long tradition, lends itself much more easily to the system in question than Belgium.

The main body of the work by M. Deploige falls naturally into the following chapters: 1. The evolution of Democracy in Switzerland. 2. Legislation by the people under the present system, comprising the "Rights of the People," both in the cantons and the Federation, in respect to the Constitution and ordinary legislation, with a description of the *optional* and the *obligatory* Referendum and the system of *initiation*, by the people. Chapter 3 treats of the results of the system. It contains a table of of the twenty-seven instances in which the Federal Referendum has been resorted to since its introduction in 1874, with a discussion of the more important examples. Finally, a collection of the opinions of a number of prominent writers upon the subject in the Swiss newspapers and periodicals furnishes an excellent review of the whole matter. The views are strangely divergent, the results of the Referendum appearing to have produced no very uniform impression upon the observers. But M. Deploige lays down the general rule that the radicals, although it was they who introduced the Referendum in 1874, now oppose it, while the conservatives, suspicious of it at first, now demand its extension in order to render its exercise the easier (p. 172). Among the jurists and professors there is little accord in the matter. M. Ernest Naville believes that the Plebiscitum has a recognized place in the adoption of constitutions, but in the case of ordinary legislation the representative system can alone realize the democratic principle in the conditions of modern society. Professor Wuarin, of the University of Geneva, on the other hand, would have no restrictions, but advocates the extension of the Referendum so as to include matters of *administration*, especially matters of finance. This is a field in which the direct action of the people has been hitherto most carefully excluded. Between these extremes are various shades of opinion.

The question of compulsory voting has, owing to the great number of abstentions, been discussed as an important corollary to the general problem. Professor Wuarin

would have voting as strictly enforced as attendance at military drill or the exercise of the functions of jurymen. Blank votes, however, may always be resorted to in order to evade the law, and to many the very demand for compulsory voting shows the weakness of the whole plan of direct interference by the people in legislation.

J. H. R.

LE GOUVERNEMENT DANS LA DEMOCRATIE, par ÉMILE DE LAVELEYE. 2 Vols. Pp. XV., 392 and 472. Paris, 1891.

In the preface to this last important work of the late M. de Laveleye, the author tells us that while he was collecting materials for a book upon Political Economy, Dupont White said to him, "Write rather a book on Politics. There are many, perhaps too many, who are treating Political Economy, but few who are treating Politics." When we consider the number of hours per week that our newspaper and magazine readers spend over political discussions, this remark of Dupont White seems strange; but with all of our writing upon politics, few can be said to treat the subject with any degree of thoroughness or system. Consequently such books as this and the late notable work of Mr. Sidgwick on the "Elements of Politics" are doubly welcome.

The chief matter for regret in connection with such works is that most of our politicians who give their time to the reading and studying of politics in newspapers and in practical life will hardly find the leisure to read these more comprehensive and thorough studies. This work, like that of Mr. Sidgwick, treats of the nature of governments and of human rights, discusses at length the functions of states, and then takes up the various means adopted by civilized governments for performing these functions. Legislatures, their composition and organization; the executive, with his powers and duties and relations to the legislature; political parties, their significance, benefits and evils; the nature of the suffrage, and nearly all of the most important questions of politics are treated fully and impartially.

In a brief review it is impossible to note more than a few of the interesting discussions given, but a word may be said regarding some that lead to conclusions somewhat different from those generally accepted by us or that touch upon topics which in this country are ordinarily not considered political.

To those who are accustomed to listen to the promises of candidates on the eve of election with reference to their intentions toward their constituents, the author's view of the relations of constituents and representatives might seem strange. He thinks that a constituency ought freely to choose the man most capable of making good laws and of governing well of those who in a general way represent their point of view in politics, and that then the constituents should stand by their representative without trying to impose upon him their wishes; such an opinion as this merits careful consideration. In these days, when in our country there is so strong a tendency toward making our representatives in Congress and State Legislatures, not to speak of nominating conventions, mere delegates to record the wishes of their constituents, instead of representative men from the constituency, whose business it is to deliberate intelligently and conscientiously upon the affairs of State and then to take independent action, we seem to be drifting toward the *referendum*, toward government, not by representatives, but by the people directly. Is the tendency a desirable one?

In contrast to the drift towards socialism, which we find in so many writers, Laveleye's opinion as to the end of the State may be cited. "The mission of the State is no longer to bend the citizen to its purposes, but to make the laws which permit individuals to attain, through their own efforts, to the full enjoyment of the fruits of their labor and to the complete development of their faculties." And yet the author is not an extreme individualist and believer in *laissez-faire*, for in a succeeding chapter upon the functions of the State, he agrees with Quesnay in saying, "The State is force

put at the service of justice. Its transitory but not less important function is to favor the advancement of civilization. It is primarily the judge and the policeman, but it is also the builder of roads and the school-master."

Most of our later students of Sociology will turn with interest to the chapter entitled "Society is not an Organism;" but in the chapter, after all, we merely find our attention drawn to the danger of pushing too far the comparison between the biological and the social organisms. The author simply wishes to insist upon the fact that in society the individuals which compose the organism have lives of their own. "Society is only the sum total (*ensemble*) of the relations existing between the individuals which compose it; relations are not a person."

The constitution makers in our new States might do well, instead of confining their reading largely to the constitutions of some of the older States in our country, to read some of the author's arguments with reference to the length of time for which representatives should be elected, to the pay of representatives, to the ideal basis of the suffrage, to methods of preventing illegitimate influences in elections, and so on. Without giving his arguments at length upon any of these points, it is interesting to note that he, with Mr. Sidgwick, thinks that our short terms of legislative offices, for one year or two years, have an injurious effect, in that they tend to make of the representative a mere delegate; and that the terms should therefore be longer. They should not be too long, for if they are, the representatives will cease to represent the ruling opinion in the country and will then pursue their own interests and not those of the people. Seven years, even five years, Laveleye considers too long a term; four years seems preferable, with a partial renewal of the chamber at each election.

He believes in the American idea so far as to favor low salaries for representatives. He fears somewhat, apparently, the unintelligent vote, for while he thinks that the suffrage should be extended until it is practically universal, with the

exception of soldiers, in some cases of preachers, etc., he still thinks that universal education resulting in universal political capacity should precede universal suffrage.

To preserve the purity of the ballot and check all kinds of illegitimate influences, he favors the secret Australian ballot system, as carried out in Belgium, and thinks further that all the expenses of the election ought to be borne by the State and not by the candidates. He well says: "If these expenses are borne by the candidates, the question will seem to be one of individual interest rather than the good of the State, whereas the election of a representative or of a municipal councillor is above all a matter of public interest."

He goes somewhat outside the field of politics, as Americans ordinarily view it, in advocating the congregational system of electing pastors to churches, thinking that the training that the church members thus get in popular elections will have a beneficial influence upon politics. The evil influence of the clergy in elections also seems to him worthy of extended comment. These discussions show mainly that the environment of the author was not that of an American.

The method of the book is not merely analytical and psychological, but is also in good part historical, and the author makes frequent use of his extended knowledge of books and men and government; and a work that has discussed at length the general principles of politics, with especial reference to bringing out the advantages of democratic government and the necessary conditions for its success, closes fitly with a long chapter upon the lessons that history teaches us upon these different questions.

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DAS KREDITWESEN DER STAATEN UND STÄDTE DER NORDAMERIKANISCHEN UNION, in seiner historischen Entwicklung, von DR. CARL COPPING PLEHN. Pp. 93. Jena, 1891.

This work of an American student, now Professor at Middlebury, Vt., is a convenient summary of the history of public

debts in American States and municipalities. A more extensive examination of the field would have led the writer into the details of local history and would have marred the continuity of the recital. The accessible materials seem to have been carefully examined, and the result is a clear and orderly exposition of the main features of the historical development.

Both in States and cities this history shows two distinct periods, one of somewhat open-handed debt-making, which was followed by constitutional restriction. It was necessary to separate States from cities in the treatment. We are shown how the liberal use of the borrowing power saddled burdens on the communities incommensurate with their resources. The discontent with this state of affairs evinced itself in the effort to unburden the debt on the Federal Government in the early forties. Unsuccessful in this attempt, the people in the revision of the constitutions very generally placed restrictions on the borrowing power, which are described in ample detail. With or without plausible pretext some of the States scaled or repudiated their debts, though the reproachful term repudiation was sometimes applied to a temporary default in interest payments, which was afterwards made good. The cities were debarred from this convenient method of ridding themselves of a disagreeable burden. The effect of these various measures has been a decrease in the absolute as well as the per capita debt of the States and cities.

The history of local debts is a chapter in that of internal improvements. The main purpose of this debt, both in States and cities, has been the promotion of such ends. Neither State nor local debt appears to any great extent prior to the era of canals and railroads, and it does not assume importance until after aid for such enterprises ceased to flow from the Federal Treasury. The debt of States was contracted most largely for what are sometimes termed productive purposes, though in the days of the war a not inconsiderable war debt was added to the public burden. Similar purposes, though of a more purely local nature, led to the

contraction of city debts, and these in turn became more prominent after constitutional restrictions had limited the borrowing power of the States. R. P. F.

METHODS OF INDUSTRIAL REMUNERATION. By DAVID F. SCHLOSS. Pp. xx. and 287. New York: G. P. Putnam's Sons. London: Williams & Norgate. 1892.

The author of this valuable little book is already known as a writer in the *Fortnightly Review*, the *Contemporary Review*, the *Economic Review* and the *Economic Journal*, and also as the author of the Chapter on the London boot trade in Mr. Chas. Booth's *Labor and Life of the People*. The present treatise is at once a summary and a continuation of his previous work.

The book treats solely of the methods of industrial remuneration considered apart from the amount. It is based on (1) the wide and varied observations of the author, at first hand, in numerous factories and workshops, mines, etc.; (2) the recent parliamentary investigations into the condition of the laboring classes, the "sweating system," etc., the reports of other systematic inquiries into the same subject by different bodies, as for instance the Social Economy Section of the Paris Exhibition of 1889; and (3) the recent publications on Labor, Wages, Profit-Sharing, Co-operation, etc.

The immense amount of material compressed into the comparatively small space is yet thoroughly digested and treated in a way that shows great powers of accurate observation and scientific analysis. The chief fault of the book is, perhaps, the too strict systematization which leads, at times, to wearying repetitions.

The discussion may be divided into two parts; (1) the wage system in its various forms, (2) the different methods of Profit-Sharing and Co-operation. The first few chapters are devoted to an analysis of the different kinds of wages.

The author then turns to a discussion of the sub-contract system, with a view to ascertaining how far that system is responsible for "sweating." He finds that "sweating" is by no means confined to this method ; many forms of sub-contract are entirely free from this evil and many other forms of remuneration afford equal opportunity for it. "The gist of the whole matter is that the workingman, who complains of the work being done under the 'method' of sub-contract, complains because the work might be, and is not, done under a foreman or other superintendent remunerated by time-wage and, for this reason, free from any strong incentive to bully the subordinate workers into over-exertion." (p. 131.)

Interesting is the restatement of the reasons why the working man objects to doing his "level best ;" these being, among others, (1) that the "Lump of Labor" (meaning a fixed, unvariable amount of work existing at any one time) may be spread out thin over the whole body of working people and (2) that any addition to the number of the unemployed not only casts an additional burden on the Trades Unions but increases the number of those ready to "scab the work."

Undoubtedly the most interesting part of the book is the author's criticism of Profit-Sharing, which he condemns in sweeping terms. "The most important of all the respects, in which this novel method compares unfavorably with the old-fashioned wage-system, is the manner in which Profit-Sharing offends against that cardinal principle of industrial remuneration which demands 'that every man shall receive his own reward according to his own labor.' (p. 189). Profit-Sharing, Mr. Schloss maintains, is only justifiable as an attempt to give to the worker those extra profits which shall result from the extraordinary zeal shown by him. As far as those extra profits are the result of the extra zeal shown by the worker, he is entitled to the whole of them and in many of the older forms of remuneration he would not fail to receive them, through any mismanagement or mal-

advertence on the part of the employer, as could be shown to be too often the case with Profit-Sharing. The author admits that there are cases in which it is impossible to measure the amount of extra zeal shown, other than as it shows itself in the profits, but even these cases the wage-systems of "progressive piece-wage" or of "collective gain-sharing" would not fail to cover. The flippant criticism of Profit-Sharing, so often heard, namely, that the losses are not also shared, is answered by the statement that if the worker expend extra force and zeal, in the hope of a share in the profits and there be no profits, he loses as well as the employer, in that he gets no return for his extraordinary exertion.

The discussion of Co-operation is a valuable addition to the literature on this subject. The author would lay more stress on the social significance of the movement than on its economic importance. "For the co-operative method, training men, as it does, to habits of self-control, developing, as it does, mutual good-will between loyal associates, and promoting, as no other method can do, self-respect and self-reliance, merits the admiration of all who have at heart the welfare of their fellow-citizens." (p. 264.)

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NOTES.

STUDENTS of economics and politics will be much pleased to note the growing interest in these subjects in the country at large. In the first issue of *ANNALS* attention was called to the number of special journals devoted to these subjects and to the increasing space given to them in the daily and weekly press. The number of special scientific journals of high character will shortly be increased by two—the *Yale Review*, which is to be converted into a review of social and economic subjects, and the *Chicago University Journal of Economics*. The number of periodicals devoted to the advocacy of specific reforms in the social and political field is steadily increasing; while the number of societies with similar aims keeps equal pace.

Equally marked is the evidence of growing interest in these subjects which is afforded by the continually expanding scope of the instruction offered in our schools and colleges. A number of new chairs have been established in the older institutions, while the opening of the Chicago and Leland Stanford Jr. Universities signalizes the addition of at least ten academic positions to those now existing. Indeed, it may almost be said that the opportunities for work along these lines are increasing more rapidly than the number of men qualified to utilize them.

Quite as striking testimony to the general fact here noted is furnished by the demand for courses in economics and politics which has shown itself in connection with University Extension work. The columns of *University Extension*, the organ of the American Society, give many instances of this. Kansas, Minnesota, Wisconsin, Indiana, Michigan, Cornell and Vanderbilt Universities have all offered courses more or less extensive in this field. All of them, to judge

from the reports, were very successful and many more courses were called for than could be supplied.

One of the most striking experiments was made by the American Society for the Extension of University Teaching, and its success was eminently satisfactory. The Society appointed Mr. Edward T. Devine, a Fellow of the Wharton School of Finance and Economy, as a Staff Lecturer in Economics. The appointment was made late in the season, after many of the centres had made their selection of courses for the winter. Only one course was offered, entitled Political Economy. It contained six lectures. A careful syllabus was prepared, containing a list of books to be read. The course was chosen by twelve centres. It cost each centre, including lecturer's fee and traveling expenses of the lecturer, \$150, besides the local expenses for hire of hall, advertising, etc., which amounted, perhaps, on the average, to \$100 more for the course. All the centres were so well pleased that they have expressed a desire for further work in the same field during the season, 1892-93. The audience included a number of ladies and the number of persons taking active part in the class exercise which followed each lecture, was a very large proportion of the total number attending.

This course was not merely a series of popular lectures dealing with the superficial aspects of current questions; on the contrary, it treated in considerable detail some of the most intricate problems relating to the doctrines of rent, wages, interest and capital. No more satisfactory evidence, therefore, than the history of this course, can be offered that the general public is coming to take a serious and a sustained interest in the vital problems connected with the field for the cultivation of which the Academy exists.

It is also a good omen for the future student of economics and politics, since it indicates the possibility of a new career for the teacher of these subjects. The experience of the University Extension Society demonstrates that the career of public lecturers on such subjects offers a pecuniary return

which does not compare unfavorably with that of the college instructorship, or even professorship.

M. DUCOUDRAY is a prolific writer of school books in history, though little or none of his work claims to be original. The second and concluding volume of the translation of his *Histoire Sommaire de la Civilisation** has recently been issued—a work which in the original French attempts to compress into 1100 pages not only a treatment of the subject in its usual sense, but also to give an account of the progress of literature, science and art from the earliest times to the present day. One of the results is what might have been anticipated—such a concentration as to render the book of little use to pupils unless supplemented by the comments and explanations of a teacher exceptionally equipped in historical training for the grades for which the book is designed. Another consequence has been an abundance of errors in matters of importance even, mistakes which persist in the English rendering, in spite of the translator's promise "to omit much and to correct freely" on account of the author's "so exclusively French" standpoint. The lack of an index can hardly be excused in a work of this sort and in this age of much book-making.

THE publishing house of Karl J. Trübner (Strassburg) proposes to issue hereafter a yearly catalogue of all the chief universities of the world.† The first of the series appeared some months since and deserves the highest praise both for the carefully collected and collated information it contains and for its elegant appearance. The universities of the United States which are included are the following: Howard, Yale, Princeton, Pennsylvania, Virginia, University of the

* THE HISTORY OF MODERN CIVILIZATION. A Handbook based upon M. GUSTAVE D. DUCOUDRAY'S *Histoire Sommaire de la Civilisation*. Pp. xx, 587. New York: Appleton & Co., 1891.

† MINERVA. Jahrbuch der Universitäten der Welt, Herausgegeben von Dr. R. KUKULA u. K. TRÜBNER, Erster Jahrgang, 1891-1892. Pp. viii., 359. Strassburg: Trübner, 1891.

City of New York, Michigan, Wisconsin, California, Cornell, Minnesota, Vanderbilt, Johns Hopkins and Clark. The list of the instructors and the subject taught by each is supplemented by a complete index of all the names mentioned.

THE first number of the new *Yale Review*, a quarterly journal of history and political science, appeared last May. It is edited by Professors George F. Fisher, George B. Adams, Henry W. Farnam, Arthur T. Hadley and Dr. John C. Schwab. "Committed to no party and to no school, but only to the advancement of sound learning, it aims to present the results of the most scientific and scholarly investigations in history and political science."

The body articles of this first issue comprise papers on German Tariff Policy, by Henry Villard and Professor Farnam; The Demarcation Line of Pope Alexander VI. by E. G. Bourne; Legal Theories of Price Regulation, by Professor Hadley; Massachusetts and the Saybrook Platform, by Williston Walker, and Labor Troubles between 1834 and 1837, by Evans Woollen.

The increase of periodical publications devoted to the serious and scientific investigation and presentation of political and economic subjects, cannot but call out the better energies of our universities and encourage more scholarly methods than have characterized much of the special work in this country in the past.

PROFESSOR NYS, of Brussels, has attempted, in the compass of some two hundred coarsely printed pages, to sketch the development of political speculation in France prior to the eighteenth century.* When one considers the necessary limitations of such a work it is at first sight difficult to see why the author included the history of International Law as well as that of Politics. The title is perhaps a little misleading, however. But a single comparatively short chapter is de-

* LES THÉORIES POLITIQUES ET LE DROIT INTERNATIONAL EN FRANCE JUSQU'AU XVII. SIÈCLE, par ERNEST NYS, Professeur à l'Université de Bruxelles, etc. Pp. 208 Bruxelles (Weissenbruch) and Paris (Alcan), 1891.

voted to International Law, or rather to the reasons why there was no history of International Law in France. Several interesting pages are given to Éméric Crucé (died 1648) and his plan of universal peace. Towards one-fourth of the volume is taken to describe the political theories of the Middle Ages. Here it is surprising in so general an account to find no mention of Marsiglio of Padua, professor at the University of Paris and author of the remarkable work, *Defensor Pacis*.

Professor Nys has given us an unsatisfactory book. It is too brief for the student and too unsymmetrical for the general reader, nor does it furnish a convenient compendium for reference, lacking, as it does, an index.

THE *American Institute of Instruction* will hold its sixty-third Annual Convention at Narragansett Pier, R. I., on July 5th, 6th, 7th and 8th. Every effort has been made to render the meeting at once profitable and agreeable. The provisional programme embraces, among others, papers by Professor Simon N. Patten of the University of Pennsylvania (The Economic Basis of Education); Professor William M. Davis of Harvard (Geographical Illustrations); President Capen of Tufts College (Grammar Schools); Professor Lorenzo Sears of Brown (English Composition in College); and Professor Chas. F. Johnson of Trinity College (The Development of Literary Taste in College Students).

THE Second Annual Session of the *School of Applied Ethics*, under the direction of Professors C. H. Toy, H. C. Adams and Felix Adler, will be held at Plymouth, Mass., July 6th to August 17th. In the department of the History of Religion there will be six courses of five lectures each, on the religious ideas of the Hebrews by prominent specialists in this field.

In economics there will be the following courses: Changes in Theory of Political Economy since Mill, by Professor H. C. Adams; Theory of Social Progress, by Professor F. H.

Giddings; Function of Philanthropy in Social Progress, by Father Huntington, of New York, and Miss Addams, of Chicago; Function of Law in Social Progress, by Professor F. W. Taussig; Statistical Presentation of Industrial and Social Questions, by Hon. Carroll D. Wright; Critical Study of the Labor Problem and the Monopoly Problem, by Professor H. C. Adams.

In the department of Ethics the chief course will be given by William Wallace, of Oxford, consisting of fifteen lectures on the Variations of the Moral Standard, illustrated by the History of Ethical Theories.

The shorter courses will include The Relation of Civil Government and the State to the Church and Religious Organizations, by Professor Burgess, of Columbia College; The Moral Evolution of Our Political Institutions, by W. L. Sheldon, of St. Louis; The Idea of Justice, with its Political and Economic Applications, by Wm. M. Salter, of Philadelphia; and The Legal Aspects of the Temperance Question, by General A. B. Nettleton, of Washington.

A SOCIETY has recently been organized in Canada called the *Canadian Association for the Study and Dissemination of Social Science*. Its establishment was largely due to the efforts of Dr. Larocque, Federal Statistician. The objects of the organization as explained in its constitution are, first, the patriotic effort "to seek by every worthy means to promote the building up of a pure, strong and united Canadian nationality, irrespective of race or language"; further special cognizance of vital statistics in order to approximate more accurately the ratio of national progress; the discussion of questions related to the physical, intellectual and moral welfare of the people, with attention to the social status of the different nationalities inhabiting Canada, and finally the dissemination of such literature among families, and public schools as shall instruct the rising generation in the laws of physical health and the principles of moral and social order.